



**ARO**<sup>®</sup>

# CHEMICAL COMPATIBILITY GUIDE

REFERENCE GUIDE FOR PUMPS





- ▶ ARO® is pleased to present this selection guide to provide a convenient and informative reference point for pump selection.

This information was compiled from information provided by material suppliers and manufacturers.

**The compatibility listings are intended as a guide only.**  
**We assume no liability for their accuracy on their use.** The user should test under their own operating conditions to determine the suitability of any compound and material in a particular application.

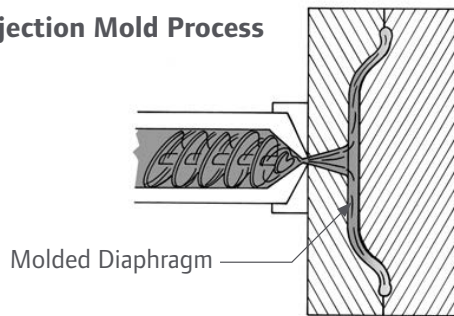
➤ **THERMOPLASTIC ELASTOMERS (TPE's) vs THERMOSETTING RUBBER DIAPHRAGMS**

Aro's direction has been to move toward replacement of traditional thermoset rubber diaphragms with thermoplastic elastomers (TPE). Examples of TPE's include: Santoprene®, Nitrile (TPE) and Hytrel®.

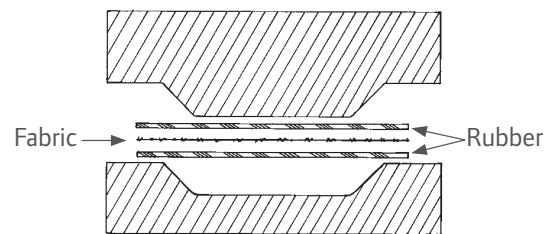
TPE's are manufactured using a plastic injection molding process where the resin, or diaphragm material, is melted and injected into a mold to produce the diaphragm. The advantages of this process includes:

| Features                               | Benefits                         |
|--|----------------------------------|
| Diaphragm is molded to optimum shape   | Excellent flex life              |
| Homogenous part                        | No delamination failures         |
| High performance resins                | Chemical, abrasion and flex life |
| Injection molded/tight process control | Low cost/consistent performance  |

**Injection Mold Process**



**Thermoset Mold Process (Lamination)**



➤ **LABORATORY TESTING HAS SHOWN:**

Santoprene® outperformed all rubber diaphragms except Buna in the mild abrasive fluids. The Geolast diaphragm had equivalent life to the Buna diaphragms and was superior to the other rubbers compounds.

PTFE with the Santoprene® backer exhibited the best flex life of all diaphragms during the test series.

➤ **TRADITIONAL THERMOSET INCLUDES: BUNA-N (TS), EPR, NEOPRENE®, VITON®**

Thermosets diaphragms are constructed by sandwiching (laminating) a layer of fabric reinforcement between two sheets of unvulcanized rubber. These are placed in a mold and compressed under heat and pressure to bond and vulcanite the rubber.

| Limitations of the process includes:   | Results                         |
|--|---------------------------------|
| Inclusion of fabric limits design flexibility to achieve optimum diaphragm shape | Lower flex life                 |
| Fabric does not remain centered between the two rubber sheets                    | Poor abrasion / chemical attack |
| Incomplete bonding can occur   | Delamination                    |
| Time/Labor intensive   | Expensive                       |
| Inconsistent quality   | Inconsistent life               |
| "Wicking" of fabric  | Delamination / Leakage          |

## ► THERMOPLASTIC COMPOUNDS (TPE)

Thermoplastic elastomeric (TPE) diaphragms are manufactured using an injection molding process. The process allows the part to be molded in the shape and configuration required of the diaphragm to provide excellent performance and life. The TPE resins used to manufacture the diaphragms exhibit excellent dimensional and tensile characteristics eliminating the fabric reinforcement. The following TPE's are used in ARO diaphragm pumps.

## ► THERMOSET (TS)

These materials are manufactured from natural rubber and man made additives to enhance resistance to various fluids. Diaphragms are manufactured using a compression molding process. A nylon fabric mesh is molded in the diaphragm to add strength to the compound.

## ► PTFE

The most chemically inert man made compound known. New diaphragm design and material processing have significantly improved flex life equivalent to or exceeding rubber compounds. A backer diaphragm is used to provide additional support.

### Rating

**A** = Excellent

**B** = Good

**C** = Fair

**D** = Poor

|               | Compound              | Color Code  | Temperature Limits** | Flex Life | Abrasion Resistance Balls (Seats) | Acid Service | Caustic Service | Solvents (Ketones/Acetates) | Hydrocarbons Aromatic/Chlorinated | Petroleum/Oils |
|---------------|-----------------------|-------------|----------------------|-----------|-----------------------------------|--------------|-----------------|-----------------------------|-----------------------------------|----------------|
| <b>TPE</b>    | Santoprene (Backer)   | Tan (Green) | -40° to 107°C        | <b>A</b>  | <b>A</b>                          | <b>A</b>     | <b>A</b>        | <b>B</b>                    | <b>D</b>                          | <b>D</b>       |
|               | Hytrel*               | Cream       | -29° to 82°C         | <b>A</b>  | <b>A</b>                          | <b>C</b>     | <b>B</b>        | <b>B</b>                    | <b>C</b>                          | <b>A</b>       |
|               | Urethane*             | Clear       | -23° to 52°C         | <b>A</b>  | <b>A</b>                          | <b>D</b>     | <b>D</b>        | <b>D</b>                    | <b>D</b>                          | <b>A</b>       |
|               | PTFE                  | White       | 4° to 107°C          | <b>A</b>  | <b>C</b>                          | <b>A</b>     | <b>A</b>        | <b>A</b>                    | <b>A</b>                          | <b>A</b>       |
| <b>Rubber</b> | Neoprene              | Green       | -18° to 93°C         | <b>B</b>  | <b>B</b>                          | <b>C</b>     | <b>C</b>        | <b>D</b>                    | <b>D</b>                          | <b>B</b>       |
|               | Nitrile (TS) (BUNA-N) | Red         | -12° to 82°C         | <b>B</b>  | <b>B</b>                          | <b>B</b>     | <b>C</b>        | <b>C</b>                    | <b>C</b>                          | <b>A</b>       |
|               | Viton                 | Yellow      | -40° to 177°C        | <b>C</b>  | <b>B</b>                          | <b>A</b>     | <b>A</b>        | <b>B</b>                    | <b>A</b>                          | <b>A</b>       |
|               | EPR/EPDM              | Blue        | -51° to 138°C        | <b>B</b>  | <b>B</b>                          | <b>B</b>     | <b>A</b>        | <b>B</b>                    | <b>D</b>                          | <b>D</b>       |

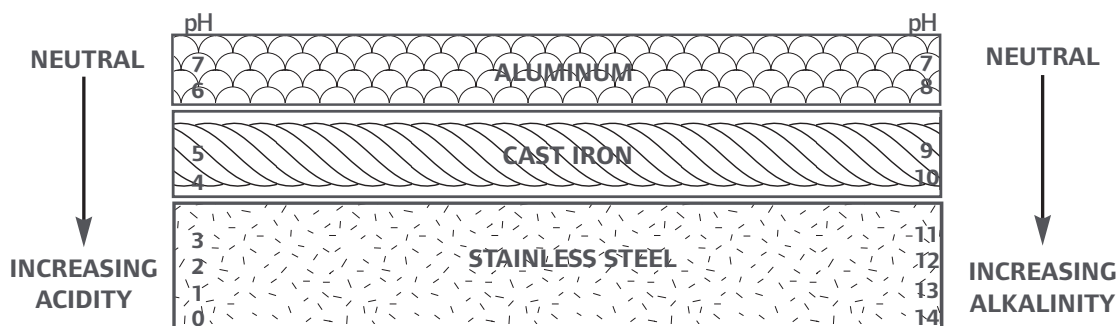
\* Not Available in all models

\*\*Maximum temperature limits are based on mechanical stress only. Certain chemicals can significantly reduce maximum safe operating temperature.

➤ **HALOGENATED SOLVENTS EXPLOSION HAZARD**

Pump models containing aluminum wetted parts cannot be used with 111.-Trichloroethylene, Methylene Chloride or other Halogenated Hydrocarbon solvents which react and explode. Although manufactures of those solvents typically add inhibitors to prevent a reaction, there is no assurance that they will prevent a reaction under all conditions. Special caution should be exercised handling reclaimed or used solvents since the inhibitors are often degraded. Only Stainless Steel or Acetal or PVDF pumps should be used for these materials. Other examples of Halogenated Hydrocarbon Solvents (H.H.C.) include, but not limited to the following: Trichloroethane, Methyl Chloride, Carbon Tetrachloride, Chloroform Dichlorethylene.

➤ **WET END MATERIAL COMPATIBILITY GUIDE**



➤ **NON-METALLICS**

**Polypropylene** - A general purpose low cost material having broad chemical resistance for use in **A** wide variety of chemical applications.

**Kynar (PVDF)** - A high performance fluoropolymer resin with excellent chemical resistance properties. Used for pumping aggressive chemicals at elevated temperature. Material also has excellent mechanical properties.

**Groundable Acetal** - An excellent material for use in solvent transfer applications. The material incorporates metallic fibers in the resin to render the material conductive to eliminate static charge build up and potential static discharge.

**Rating**  
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**D** = Poor

| Non-Metallic Wet End Materials | Temperature Limits** | Acid Service | Caustic Service | Solvents (Ketones/Acetates) | Hydrocarbons Aromatic/Chlorinated |
|--------------------------------|----------------------|--------------|-----------------|-----------------------------|-----------------------------------|
| Polypropylene                  | 0° to 79°C           | <b>A</b>     | <b>A</b>        | NR                          | NR                                |
| PVDF                           | -12° to 93°C         | <b>A</b>     | <b>A</b>        | *                           | *                                 |
| Groundable Acetal              | -29° to 82°C         | <b>D</b>     | <b>D</b>        | <b>A</b>                    | <b>A</b>                          |

\* Check compatibility guide for part specific solvent or hydrocarbon  
 \*\*Maximum temperature is based on mechanical stress only. Certain chemicals can significantly reduce maximum safe operating temperature

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X or Brackets around a rating letter, no data is available, but the ratings are made on the basis of exposure test in similar chemical groups.

\*All degrees are in Fahrenheit



| MATERIAL                              | NITRILE | SANTOPRENE® | PTFE | HYTREL® | NEOPRENE® | URETHANE | EPR/EPDM | VITON® | UHMW-PE | LEATHER | POLYPROPYLENE | ACETAL | PVDF | ALUMINUM | CAST IRON | STAINLESS | HASTELLOY® |
|---------------------------------------|---------|-------------|------|---------|-----------|----------|----------|--------|---------|---------|---------------|--------|------|----------|-----------|-----------|------------|
| Acetaldehyde (Ethanol)                | D       | B           | A    | B       | D         | D        | A        | D      | B       | B       | C             | A      | D    | B        | A         | A         | A          |
| Acetamide(Ethanamide)                 | A       | A           | A    | D       | B         | D        | A        | A      | A       | X       | A/21          | A      | A/24 | A        | A         | A         | A          |
| Acetate Solvents                      | D       | B           | A    | D       | D         | D        | A        | D      | B       | X       | B             | A/21   | A/21 | A        | D         | A         | A          |
| Acetic Acid                           | C       | B           | A    | D       | C         | C        | A        | C      | B       | D       | B             | D      | A    | B        | D         | A         | A          |
| Acetic Anhydride                      | D       | A           | A    | C(B)    | B         | D        | B        | D      | D       | B       | C             | D      | D    | B        | D         | A         | A          |
| Acetone                               | D       | B           | A    | C       | D         | D        | A        | D      | A       | X       | D             | B      | D    | A        | A         | A         | A          |
| Acetonitrile (Methyl Cyanide)         | D       | A/21        | A    | X       | D         | B        | A        | D      | X       | X       | B/21          | X      | A/49 | A        | A         | A         | B          |
| Acetophenone (Acetyl Benzene)         | D       | B           | A    | X       | D         | X        | B        | D      | X       | X       | B/21          | X      | A/21 | B        | A         | A         | B          |
| Acetyl Acetone                        | D       | X           | A    | X       | D         | D        | A        | D      | X       | X       | X             | X      | X    | D        | A         | A         | X          |
| Acetyl Chloride                       | D       | B/21        | A    | D       | D         | D        | D        | B      | D       | X       | D             | X      | A/49 | D        | A         | B         | A          |
| Acetylene                             | A       | X           | A    | A       | B         | D        | A        | A      | X       | A       | D             | A      | A    | A        | A         | A         | A          |
| Acetyl Salicylic Acid (Aspirin)       | X       | C           | A    | X       | B         | X        | B        | A      | A       | X       | X             | X      | X    | D        | B         | B         | X          |
| Acrolein (Acryaldethyde)              | X       | A           | A    | D       | D         | D        | A        | B      | X       | X       | X             | X      | X    | B        | B         | B         | X          |
| Acrylonitrile (Vinyl Cyanide)         | D       | D           | A    | D       | D         | D        | D        | C      | X       | X       | B             | X      | A/21 | A        | A         | A         | A          |
| Adipic Acid                           | B       | B           | A    | D       | A/60      | X        | A        | A      | A       | X       | A             | A/21   | A    | B        | B         | B         | A          |
| Aero Lubriplate                       | A       | C           | A    | D       | A         | X        | D        | A      | X       | X       | A             | A      | A    | A        | A         | A         | A          |
| Aerosafe 2300                         | D       | B           | A    | A       | D         | A        | A        | D      | X       | X       | X             | A      | X    | A        | A         | A         | X          |
| Aerosafe 2300W                        | D       | B           | A    | A       | D         | D        | A        | D      | X       | X       | X             | A      | X    | A        | A         | A         | X          |
| Aeroshell 1AC                         | A       | D           | A    | D       | B         | B        | D        | A      | X       | X       | A             | A      | B    | A        | A         | A         | A          |
| Aeroshell 7A Grease                   | A       | D           | A    | D       | B         | D        | D        | A      | X       | X       | X             | A      | X    | A        | A         | A         | X          |
| Aeroshell 17 Grease                   | A       | D           | A    | D       | B         | A        | D        | A      | X       | X       | X             | A      | X    | A        | A         | A         | X          |
| Aeroshell 750                         | C       | D           | A    | D       | D         | A        | D        | A      | X       | X       | X             | A      | X    | A        | A         | A         | A          |
| Alcohol Amyl (1-Pentanol)             | B       | A           | A    | A       | B         | D        | A        | B      | A       | X       | A             | A      | A    | B/21     | B         | A         | A          |
| Alcohol Benzyl (Phenol Carbinol)      | D       | A           | A    | D       | B         | C        | C        | A      | A       | X       | A/21          | A/21   | A    | B/21     | A         | A         | A          |
| Alcohol Butyl (Butanol)               | B       | A           | A    | D       | A         | D        | A        | A      | A       | X       | B             | A      | A    | B        | B         | A         | A          |
| Alcohol Diacetone (Tyranton)          | D       | C           | A    | D       | D         | D        | B        | D      | X       | X       | B             | A      | A/21 | B        | B         | A         | A          |
| Alcohol Ethyl (Ethanol)               | A       | B           | A    | A       | A         | D        | A        | A      | A       | X       | A             | A      | A    | B/93     | A         | A         | A          |
| Alcohol Hexyl (1-Hexanol)             | A       | B           | A    | D       | B         | D        | B        | A      | X       | X       | A/21          | A      | A    | A        | A         | A         | A          |
| Alcoh. Isobutyl (2-Methyl-1-Propanol) | C       | A           | A    | B       | A         | D        | B        | A      | X       | X       | A/21          | A      | A    | B        | C         | A         | A          |
| Alcohol Isopropyl (2-Propanol)        | C       | B           | A    | A       | B         | D        | B        | A      | X       | X       | A             | A      | A/66 | B        | C         | A         | A          |
| Alcohol Methyl (Methanol)             | A       | A           | A    | A       | A         | D        | B        | D      | A       | X       | A/49          | A      | A    | B        | A         | A         | A          |
| Alcohol Octyl (Caprylic Alcohol)      | X       | B           | A    | D       | B         | D        | A        | A      | X       | X       | X             | A      | X    | A        | A         | A         | A          |
| Alcohol Propyl (Propanol)             | A       | A           | A    | D       | A         | D        | B        | A      | C       | X       | A             | A      | A/49 | A        | A         | A         | A          |
| Allyl Alcohol                         | A       | A           | A    | D       | A         | B        | A        | B      | A       | X       | A             | X      | A    | B        | A         | A         | A          |
| Allyl Bromide                         | D       | X           | A    | D       | D         | A        | D        | B      | X       | X       | X             | X      | X    | D        | A         | X         | X          |
| Allyl Chloride                        | C       | X           | A    | D       | D         | D        | D        | B      | B       | X       | A             | X      | A    | D        | C         | B         | X          |
| Alkazine                              | D       | D           | A    | D       | D         | D        | X        | A      | B       | X       | X             | X      | X    | X        | X         | X         | X          |
| Almond Oil (Artificial)               | D       | C           | A    | D       | D         | D        | B/21     | D      | X       | X       | D             | X      | X    | X        | X         | X         | X          |
| Alum (Alum Potasium Sulfate)          | A       | A           | A    | D       | A         | D        | A        | A      | A       | X       | A             | A      | A    | C        | D         | B         | B          |
| Aluminum Acetate                      | X       | A           | A    | X       | B         | D        | A        | D      | A       | X       | A             | A      | X    | A        | D         | B         | B          |
| Aluminum Ammonium Sulfate             | A       | B           | A    | X       | A/77      | X        | A        | A      | X       | X       | A             | X      | A    | X        | X         | X         | X          |
| Aluminum Bromide                      | B       | B           | A    | D       | A         | D        | A        | A      | X       | X       | X             | X      | A    | X        | X         | X         | X          |
| Aluminum Chloride                     | A       | A           | A    | B       | A         | B        | A        | A      | A       | X       | A             | B      | A    | B        | D         | C         | A          |
| Aluminum Fluoride                     | B       | A           | A    | X       | A         | C/21     | B        | A      | A       | X       | A             | D      | A    | B        | D         | A         | B          |

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|--------------------------------|---------|-------------|------|---------|-----------|----------|----------|--------|---------|---------|---------------|--------|------|-----------|-----------|-----------|------------|
| Aluminum Hydroxide             | A       | A           | A    | D       | A         | B        | A        | A      | A       | X       | A             | A      | A    | A         | D         | A         | B          |
| Aluminum Nitrate               | A       | A           | A    | X       | A/21      | C        | A        | A      | A       | X       | A             | B      | A    | B         | D         | A         | B          |
| Aluminum Phosphate             | A       | A           | A    | X       | A         | D        | A        | A      | X       | X       | A             | A      | A    | X         | X         | A         | X          |
| Alum. Potassium Sulfate (Alum) | A       | A           | A    | D       | A         | D        | A        | A      | A       | X       | A             | A      | A    | C         | D         | B         | B          |
| Aluminum Sulfate (Sulphate)    | A       | A           | A    | (B)     | A         | B        | A        | A      | A       | A       | A             | B/21   | A    | A         | D         | A         | A          |
| Amines                         | D       | A           | A    | D       | D         | D        | C        | D      | A       | D       | B/49          | C/21   | X    | A         | D         | A         | B          |
| "Ammonia, Gas, Cold"           | B       | A           | A    | D       | A         | B        | A        | D      | A       | X       | B             | A      | D    | X         | X         | X         | X          |
| "Ammonia, Anhydrous"           | B       | A           | A    | D       | A         | X        | A        | D      | A       | D       | A/21          | D      | D    | A/21      | A         | A         | A          |
| Ammonia Liquids                | B       | A           | A    | X       | A         | B        | A        | D      | D       | X       | A/21          | D      | A    | D         | A         | A         | B          |
| Ammonia Nitrate                | A       | A           | A    | X       | C         | B        | A        | D      | X       | X       | A             | B/21   | A    | C         | A         | A         | B          |
| Ammonium Acetate               | A       | A           | A    | D       | A         | D        | A        | A      | A       | X       | A             | C      | X    | B         | A         | X         | X          |
| Ammonium Bicarbonate           | B       | A           | A    | X       | A         | C        | B        | D      | A       | X       | X             | X      | X    | X         | X         | X         | X          |
| Ammonium Bifluoride            | A       | A           | A    | X       | A         | D        | A        | A      | X       | X       | A             | X      | A    | X         | D         | X         | X          |
| Ammonium Carbonate             | C       | A           | A    | X       | A         | A        | A        | A      | A       | A       | A             | D      | A    | B         | B         | B         | B          |
| Ammonium Casenite              | X       | A           | A    | X       | A         | X        | X        | X      | X       | X       | X             | A      | X    | X         | X         | A         | X          |
| Ammonium Chloride 1%           | A       | A           | A    | A/21    | A         | B/21     | A        | A      | A       | X       | A             | A      | A    | C         | D         | C         | A          |
| Ammonium Dichromate            | B       | A           | A    | X       | A         | X        | A        | X      | X       | X       | X             | X      | X    | A         | A         | X         | X          |
| Ammonium Diphosphate           | X       | A           | A    | D       | A         | X        | A        | A      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Ammonium Fluoride              | B       | B           | A    | X       | B         | X        | A        | A      | A       | X       | A             | X      | A    | D         | D         | D         | A          |
| Ammonium Hydroxide             | B       | A           | A    | (B)     | A         | D        | A        | B      | A       | B       | A             | B      | A    | B         | B         | B         | A          |
| Ammonium Nitrate               | A       | A           | A    | X       | A         | A        | A        | A      | A       | X       | A             | B      | A    | B         | A         | A         | A          |
| Ammonium Nitrite               | A       | A           | A    | X       | A         | D        | A        | A      | A       | A       | A/21          | X      | A    | X         | X         | A         | X          |
| Ammonium Oxalate- 5% Sol.      | B       | A           | A    | X       | A         | X        | A        | X      | A       | X       | X             | B      | X    | X         | D         | A         | A          |
| Ammonium Persulfate Sol.       | D       | A           | A    | X       | A         | D        | B        | A      | A       | X       | A             | X      | A    | C         | D         | A         | A          |
| Ammonium Phosphate             | A       | A           | A    | B       | A         | B        | A        | A      | B       | X       | A             | B      | A    | B         | D         | A         | A          |
| Ammonium Sulfamate             | A       | A           | A    | B       | A         | A        | A        | A      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Ammonium Sulfate               | A       | A           | A    | B       | A         | A        | A        | A      | A       | X       | A             | A      | A    | B         | C         | A         | B          |
| Ammonium Sulfide               | X       | X           | A    | X       | A         | B        | A        | D      | A       | X       | X             | X      | X    | X         | X         | X         | X          |
| Ammonium Sulfite               | A       | A           | A    | X       | A         | D        | A        | A      | D       | X       | A             | D      | X    | C         | D         | B         | A          |
| Ammonium Sulphate 1% - 5%      | A       | X           | A    | C       | A         | B        | X        | D      | A       | X       | A             | A      | A    | B         | C         | A         | B          |
| Ammonium Thiocyanate           | X       | X           | A    | X       | A         | X        | A        | A      | A       | X       | X             | X      | A    | C         | C         | A         | A          |
| Ammonium Thiosulfate           | A       | A           | A    | X       | A         | X        | A        | A      | X       | X       | X             | B      | X    | A         | D         | A         | X          |
| Ammonium Thiophosphate         | A       | A           | A    | D       | A         | X        | A        | A      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Amyl Acetate (banana oil)      | D       | D           | A    | C       | D         | D        | A        | D      | B       | B       | B             | D      | A/49 | B         | X         | A         | B          |
| Amyl Alcohol                   | B       | A           | A    | A       | A         | D        | A        | A      | A       | X       | B             | A      | A    | B         | C         | A         | B          |
| Amyl Borate                    | X       | B           | A    | X       | A         | D        | D        | A      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Amyl Chloride (Chloropentane)  | D       | C           | A    | D       | D         | C        | D        | A      | D       | X       | D             | A      | A    | D         | A         | A         | B          |
| Amyl Chloranaphthalene         | C       | C           | A    | X       | D         | D        | D        | A      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Amyl Naphthalene               | D       | C           | A    | D       | D         | D        | D        | A      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Amyl Phenol                    | X       | C           | A    | X       | X         | X        | X        | A      | X       | X       | X             | X      | X    | A         | A         | A         | A          |
| "Anderol, L-774 (Di-Ester)"    | X       | X           | A    | X       | D         | D        | D        | A      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| L-826 (Di-Ester)               | D       | D           | A    | D       | D         | D        | D        | A      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| L-829 (Di-Ester)               | D       | D           | A    | D       | D         | D        | D        | A      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| ANG-25 (Glyceral Ester)        | D       | X           | A    | X       | B         | D        | A        | A      | X       | X       | X             | X      | X    | X         | X         | X         | X          |



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|---------------------------------|---------|-------------|------|---------|-----------|----------|----------|--------|---------|---------|---------------|--------|------|----------|-----------|-----------|------------|
| ANG-25 (Di-Ester Base) (TG7449) | D       | D           | A    | X       | D         | D        | D        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Anhydrous Ammonia               | B       | A           | A    | D       | D         | D        | A        | D      | X       | X       | A/21          | D      | D    | B        | D         | A         | A          |
| Anhydrous Hydrazine             | D       | X           | A    | X       | B         | D        | B        | D      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Anhydrous Hydrogen Fluoride     | D       | C           | A    | X       | X         | D        | A        | D      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Aniline                         | D       | A           | A    | C       | D         | D        | D        | D      | C       | X       | A             | A/21   | A/21 | C        | C         | A         | B          |
| Aniline Dyes                    | D       | B           | A    | D       | B         | D        | A        | A      | C       | X       | X             | D      | X    | B        | A         | B         | X          |
| Aniline Hydrochloride           | D       | A           | A    | X       | D         | D        | B        | B      | C       | X       | D             | X      | A/38 | D        | D         | D         | X          |
| Aniline Oil                     | D       | C           | A    | D       | D         | D        | B        | C      | X       | X       | X             | X      | X    | B        | A         | A         | B          |
| Aniline Sulfite                 | X       | X           | X    | X       | X         | X        | X        | X      | X       | X       | X             | X      | X    | X        | X         | C         | X          |
| Animal Oil (Lard Oil)           | B       | B           | A    | B       | A         | C        | A        | A      | A       | X       | A             | A      | A    | A        | A         | A         | A          |
| Animal Gelatin                  | B       | B           | A    | X       | A         | A        | A        | A      | X       | X       | X             | X      | X    | X        | X         | A         | X          |
| AN-0-3 Grade M                  | B       | B           | A    | D       | D         | B        | B        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| AN-0-6                          | B       | X           | A    | D       | A         | D        | A        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| AN-0-366                        | B       | X           | A    | D       | D         | D        | C        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Ansul Ether 161 or 181          | D       | D           | A    | D       | X         | B        | C        | D      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Anthraquinone                   | D       | D           | A    | D       | D         | B        | C        | D      | X       | X       | X             | X      | X    | B        | B         | B         | A          |
| Anti-Freeze (Ethylene Glycol)   | A       | A           | A    | A/21    | A         | B        | A        | A      | A       | X       | A             | B      | A    | B        | B         | A         | A          |
| Antimony Chloride               | B       | A           | A    | D       | D         | X        | A        | B      | A       | X       | A             | X      | A    | B        | A         | A         | A          |
| Antimony Trichloride            | X       | A           | A    | D       | C         | D        | B        | A      | A       | X       | A             | X      | A    | B        | A         | A         | B          |
| AN-VV-0-366b Hydr. Fluid        | D       | D           | A    | D       | C         | D        | D        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Aqua Regia(20% Nitric, 80% HCL) | D       | D           | A    | D       | D         | D        | B/60     | A/21   | B       | X       | B/21          | D      | A/21 | D        | D         | D         | C          |
| Argon                           | A       | A           | A    | A       | D         | A        | A        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Aroclor                         | D       | D           | A    | C       | D         | B/21     | B        | A      | X       | X       | D             | X      | X    | A        | B         | A         | A          |
| Aromatic Fuel 50%               | X       | C           | A    | X       | D         | D        | D        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Aromatic Hydrocarbons           | D       | C           | A    | C/21    | D         | D        | D        | A      | X       | X       | D             | A      | X    | A        | A         | A         | X          |
| Arsenic Acid                    | A       | A           | A    | D       | B         | C        | A        | A      | X       | B       | A             | D      | A    | D        | D         | A         | B          |
| Arsenic Trichloride             | B       | B           | A    | D       | A         | X        | D        | A      | A       | X       | X             | D      | X    | D        | D         | D         | B          |
| Ascorbic Acid                   | X       | X           | A    | X       | A         | X        | X        | X      | X       | X       | X             | X      | X    | A        | D         | A         | X          |
| Askarel                         | C       | D           | A    | D       | D         | D        | D        | A      | X       | X       | X             | X      | X    | X        | X         | A         | X          |
| Asphalt                         | B       | B           | A    | (B)     | C         | B        | D        | A      | X       | A       | A             | B      | A    | A        | B         | A         | X          |
| Asphalt Emulsion                | B       | B           | A    | B       | B         | B        | D        | A      | A       | X       | X             | X      | A    | B        | A         | A         | A          |
| Asphalt Topping                 | B       | B           | A    | B       | B         | B        | D        | A      | A       | X       | D             | D      | D    | A        | A         | A         | A          |
| ASTM Oil, NO. 1                 | C       | C           | A    | A       | B         | B        | D        | A      | A       | X       | X             | A      | X    | A        | A         | A         | A          |
| No.2                            | X       | C           | A    | A       | B         | D        | D        | A      | A       | X       | X             | A      | X    | A        | A         | A         | A          |
| No.3                            | C       | C           | A    | A       | C         | D        | D        | A      | A       | X       | X             | A      | X    | A        | A         | A         | A          |
| No.4                            | X       | X           | A    | D       | D         | D        | D        | A      | A       | X       | X             | A      | X    | A        | A         | A         | A          |
| B                               | B       | C           | A    | A       | D         | D        | D        | A      | X       | X       | X             | X      | X    | A        | A         | A         | A          |
| C                               | C       | D           | A    | A       | D         | D        | D        | A      | X       | X       | X             | X      | X    | A        | A         | A         | A          |
| ASTM Reference Fuel A           | B       | B           | A    | A       | B         | D        | D        | A      | X       | X       | X             | X      | X    | A        | A         | A         | A          |
| Atlantic Dominion F             | X       | C           | A    | D       | B         | D        | D        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Aurex 903R (Mobile)             | X       | X           | A    | D       | B         | A        | D        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Automatic Transmission Fluid    | X       | D           | A    | A       | B         | B        | D        | A      | X       | X       | X             | A      | X    | A        | A         | A         | A          |
| Aviation Gasoline, Mil.         | B       | X           | A    | D       | C         | D        | D        | A      | X       | X       | X             | X      | X    | A        | A         | A         | A          |
| Bardol B                        | D       | D           | A    | D       | X         | X        | D        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Barium Carbonate                | A       | A           | A    | X       | A         | B        | A        | A      | B       | A       | A             | A      | A    | D        | A         | A         | A          |



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|------------------------------------|---------|-------------|------|---------|-----------|----------|----------|--------|---------|---------|---------------|--------|------|-----------|-----------|-----------|------------|
| Barium Chloride                    | A       | A           | A    | X       | A         | A        | A        | A      | B       | X       | A             | A      | A    | D         | D         | B         | A          |
| Barium Cyanide                     | D       | A           | A    | X       | A         | X        | A        | A      | X       | X       | D             | B      | X    | C         | B         | A         | X          |
| Barium Hydroxide (Barium Hydrate)  | A       | A           | A    | (B)     | A         | A        | A        | A      | A       | B       | A             | D      | A    | D         | B         | A         | B          |
| Barium Nitrate                     | A       | A           | A    | X       | A         | B        | A        | A      | B       | X       | A             | B      | A    | B         | A         | A         | A          |
| Barium Sulfate                     | A       | A           | A    | D       | A         | A        | A        | A      | A       | A       | A             | B      | A    | D         | B         | A         | A          |
| Barium Sulfide                     | A       | A           | A    | X       | A         | A        | A        | A      | B       | A       | A             | A      | A    | D         | D         | B         | A          |
| Bayol D                            | D       | D           | A    | X       | A         | X        | D        | A      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Bayol 35                           | D       | D           | A    | X       | A         | X        | D        | A      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Beef Extract                       | A       | A           | A    | X       | A         | X        | X        | A      | X       | X       | X             | X      | X    | X         | D         | A         | X          |
| Benzaldehyde                       | D       | D           | A    | B       | D         | D        | A        | D      | C       | X       | D             | A      | A/21 | A         | A         | A         | A          |
| Benzene (Benzol)                   | C       | C           | A    | B       | D         | D        | D        | B      | D       | B       | B             | A      | A    | B         | B         | B         | A          |
| Benzene Sulfonic Acid              | D       | A           | A    | X       | B         | D        | D        | B      | D       | X       | B/21          | C      | A    | D         | D         | B         | B          |
| Benzyl Acetate                     | X       | X           | A    | D       | X         | X        | X        | D      | C       | X       | X             | X      | X    | A         | A         | A         | B          |
| Benzyl Alcohol                     | D       | D           | A    | C       | C         | D        | C        | A      | A       | X       | A             | X      | A    | A         | A         | A         | B          |
| Benzyl Benzoate                    | X       | C           | A    | D       | D         | D        | B        | A      | X       | X       | X             | X      | X    | A         | B         | B         | B          |
| Benzyl Chloride (Chlorotoluene)    | D       | C           | A    | D       | D         | D        | D        | A      | A       | X       | D             | A      | A    | D         | D         | B         | A          |
| Benzoic Acid                       | D       | A           | A    | D       | D         | D        | B        | A      | A       | A       | A             | B      | A    | B         | D         | B         | B          |
| Benzol (Benzene)                   | D       | C           | A    | B       | D         | D        | D        | B      | D       | X       | D             | A      | A/21 | B         | B         | A         | A          |
| Bichloride of Mercury              | B       | B           | A    | X       | A         | A/21     | A        | A      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Biphenyl (Diphenyl)                | D       | D           | A    | X       | D         | D        | D        | A      | X       | X       | X             | X      | X    | A         | A         | X         | X          |
| Bismuth Subcarbonate               | X       | D           | A    | D       | D         | D        | A        | X      | A       | X       | X             | X      | X    | X         | X         | X         | X          |
| Black Point 77                     | X       | X           | A    | X       | C         | C/21     | A        | A      | X       | X       | X             | X      | X    | X         | X         | B         | X          |
| Black Sulphate Liquor              | X       | X           | A    | B       | B         | D        | B        | B      | A       | X       | X             | X      | A/79 | C         | B         | A         | B          |
| Blast Furnace Gas                  | X       | A           | A    | B       | D         | D        | D        | A      | A       | X       | X             | D      | X    | X         | X         | X         | X          |
| Bleach Solutions (Water, Chlorine) | D       | B           | A    | C       | D         | D        | A        | B      | B       | X       | B             | D      | A    | D         | D         | B         | B          |
| Blood (Meat Juices - Cold)         | D       | B           | A    | D       | A         | D        | A        | C      | X       | X       | A             | X      | X    | A         | D         | A         | X          |
| Borax (Sodium Borate)              | A       | A           | A    | A       | A         | A        | A        | A      | A       | A       | A             | A      | A    | C         | A         | A         | A          |
| Bordeaux Mixtures                  | B       | A           | A    | B       | A         | D        | A        | A      | A       | X       | X             | X      | X    | D         | C         | A         | A          |
| Boric Acid                         | A       | A           | A    | A/21    | A         | A/21     | A        | A      | A       | A       | A             | C      | A    | B         | D         | A         | A          |
| Boron Fuels (HEF)                  | C       | D           | A    | D       | D         | A        | D        | A      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Brake Fluid (Non-Petroleum)        | D       | A           | A    | D       | B         | A        | A        | D      | A       | X       | D             | X      | X    | A         | A         | A         | A          |
| Brine (Sodium Chloride)            | A       | A           | A    | B       | B         | B        | A        | A      | A       | X       | A/21          | A      | A    | C         | D         | A         | A          |
| Brewery Slop                       | X       | A           | A    | D       | A         | A        | A        | A      | X       | X       | X             | X      | X    | X         | A         | A         | X          |
| Bromine                            | D       | C           | A    | D       | D         | D        | C        | A      | D       | X       | B/22          | D      | A/66 | D         | D         | D         | A          |
| Bromine- Anhydrous                 | D       | C           | A    | D       | D         | D        | D        | A      | D       | X       | D             | D      | A/66 | D         | D         | D         | A          |
| Bromine- Pentafluoride             | D       | D           | A    | X       | D         | D        | D        | D      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Bromine Trifluoride                | D       | C           | A    | D       | D         | D        | D        | D      | X       | X       | D             | D      | X    | D         | D         | B         | X          |
| Bromine Water                      | D       | B           | A    | D       | D         | D        | D        | B      | X       | X       | D             | D      | A    | D         | D         | B         | X          |
| Bromobenzene                       | D       | D           | A    | D       | D         | D        | D        | B      | D       | X       | D             | D      | A    | D         | B         | B         | B          |
| Bromochloromethane                 | X       | X           | A    | X       | D         | D        | B        | C      | X       | X       | X             | X      | X    | D         | B         | B         | B          |
| Bromochloro Trifluoroethane        | X       | D           | A    | X       | D         | D        | D        | A      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Bromotoluene                       | X       | X           | A    | X       | X         | X        | X        | B      | X       | X       | X             | X      | X    | D         | A         | A         | A          |
| Bronzing Liquid                    | X       | A           | A    | X       | D         | D        | B/21     | D      | X       | X       | X             | X      | X    | X         | X         | A         | A          |
| Bunker Oil                         | B       | B           | A    | D       | D         | D        | D        | A      | A       | X       | X             | X      | X    | A         | A         | A         | A          |
| Butadiene (Monomer)                | D       | D           | A    | D       | D         | D        | D        | B      | D       | A       | D             | A      | A    | A         | A         | A         | X          |

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|--------------------------------------|---------|-------------|------|---------|-----------|----------|----------|--------|---------|---------|---------------|--------|------|----------|-----------|-----------|------------|
| Butane (LPG) (Butyl Hydride)         | A       | D           | A    | A       | B         | D        | D        | A      | D       | A       | B             | A      | A    | A        | A         | A         | A          |
| Butanol (Butyl Alcohol)              | B       | B           | A    | B       | A         | D        | A        | A      | A       | X       | B             | A      | A    | B        | B         | A         | A          |
| Butter                               | A       | B           | A    | B       | B         | A        | A        | A      | A       | X       | A             | A      | A    | A        | D         | A         | X          |
| Buttermilk                           | A       | A           | A    | X       | A         | A        | A        | A      | A       | A       | A             | A      | A    | A        | D         | A         | A          |
| Butyl Acetate                        | B       | B           | A    | C       | D         | D        | D        | D      | B       | X       | B/21          | B      | A    | A        | A         | A         | A          |
| Butyl Acetyl Ricinoleate             | D       | B           | A    | X       | B/21      | D        | A/21     | A/21   | X       | X       | X             | X      | X    | A        | A         | A         | A          |
| Butyl Acrylate                       | D       | C           | A    | D       | D         | X        | D        | D      | A       | X       | D             | A      | A/21 | X        | X         | X         | X          |
| Butyl Alcohol (Butanol)              | A       | A           | A    | B       | A         | D        | B        | A      | A       | X       | A/21          | X      | A    | A        | B         | A         | A          |
| Butyl Amine (Aminobutane)            | B       | A           | A    | D       | D         | D        | D        | D      | A       | X       | B             | C      | B/21 | A        | A         | A         | B          |
| Butyl Benzoate                       | X       | C           | A    | X       | D         | D        | A        | A      | X       | X       | X             | A      | X    | B        | B         | B         | B          |
| Butyl Butyrate                       | X       | C           | A    | D       | D         | X        | A        | X      | X       | X       | X             | X      | X    | A        | A         | A         | A          |
| Butyl Carbitol                       | D       | B           | A    | X       | C         | D        | A        | C      | X       | X       | X             | A      | X    | X        | X         | X         | X          |
| Butyl Cellosolve                     | D       | A           | A    | X       | D         | D        | A        | D      | X       | X       | X             | A      | B    | X        | X         | X         | X          |
| Butyl Chloride (Chlorobutane)        | D       | D           | A    | X       | C         | X        | X        | A      | X       | X       | D             | X      | A    | A/21     | A         | A         | A          |
| Butyl Ether (DiButyl Ether)          | X       | C           | A    | X       | B         | X        | X        | C      | A       | X       | D             | X      | A/38 | A        | A         | A         | X          |
| Butyl Oleate                         | D       | C           | A    | X       | D         | X        | B        | A      | X       | X       | X             | A      | X    | X        | X         | X         | X          |
| Butyl Stearate                       | C       | C           | A/21 | X       | D         | B        | D        | A      | A       | X       | X             | A      | A/38 | B        | B         | B         | B          |
| Butylene (Butene)                    | C       | C           | A    | B       | C         | C        | C        | A      | X       | X       | B             | A      | A    | A        | X         | A         | X          |
| Butyraldehyde                        | D       | C           | A    | D       | D         | D        | C        | D      | C       | X       | D             | A      | B    | A        | A         | A         | A          |
| Butyric Acid                         | D       | A           | A    | B       | D         | D        | B        | B      | B       | X       | A             | D      | A    | A        | D         | B         | A          |
| Butyric Anhydride                    | X       | A           | A    | X       | X         | X        | X        | X      | D       | X       | X             | X      | X    | A        | A         | A         | A          |
| Butyronitrile                        | X       | X           | A    | D       | D         | X        | A        | C      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Cadmium Sulfate (25% Concentration)  | X       | X           | A    | D       | X         | D        | X        | X      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Calcium Acetate (Hydrate)            | X       | X           | A    | D       | B         | D        | A        | D      | X       | X       | X             | X      | X    | C        | C         | B         | B          |
| Calcium Acid Sulphate                | X       | X           | A    | X       | C         | X        | B        | D      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Calcium Bisulphate                   | A       | X           | A    | X       | C         | A        | A        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Calcium Bisulfide                    | A       | D           | A    | B       | A         | A        | D        | A      | X       | X       | A             | A      | A    | C        | D         | B         | A          |
| Calcium Bisulfite                    | A       | D           | A    | D       | A         | A        | D        | A      | A       | A       | A             | D      | A    | D        | D         | A         | A          |
| Calcium Carbonate (Chalk)            | A       | A           | A    | X       | A         | D        | A        | A      | A       | A       | A             | A      | A    | C        | B         | A         | A          |
| Calcium Chlorate                     | A       | A           | A    | X       | A         | B        | A        | A      | A       | X       | A             | X      | A    | B        | B         | B         | B          |
| Calcium Chloride (Brine)             | A       | A           | A    | A       | A         | A        | A        | A      | A       | X       | A             | D      | A    | C        | C         | C         | A          |
| Cal. Hydrosulfide (Cal. Sulfhydrate) | X       | A           | A    | X       | A         | X        | A        | A      | A       | X       | X             | X      | X    | X        | X         | X         | X          |
| Calcium Hydroxide - 10% (Boiling)    | A       | A           | A    | B       | A         | A        | A        | A      | D       | A       | A             | A/66   | A    | C        | A         | A         | A          |
| Calcium Hypochlorite                 | C       | A           | A    | B       | D         | D        | A        | A      | A       | D       | A             | A      | A    | C        | D         | A         | A          |
| Calcium Nitrate                      | C       | A           | A    | X       | B         | D        | B        | A      | A       | X       | A             | D      | A    | B        | C         | B         | B          |
| Calcium Oxide (Unslaked Lime)        | A       | A           | A    | B       | A         | B        | A        | A      | A       | X       | X             | X      | X    | A        | A         | A         | A          |
| Calcium Silicate                     | X       | X           | A    | X       | A         | X        | A        | A      | X       | X       | X             | X      | X    | A        | B         | A         | A          |
| Calcium Sulfate (Gypsum)             | A       | A           | A    | X       | D         | B        | A        | A      | A       | X       | A             | D      | A    | B        | A         | A         | B          |
| Calcium Sulfide                      | A       | A           | A    | X       | B         | A        | A        | A      | X       | X       | A/49          | X      | A    | A        | B         | B         | A          |
| Calcium Sulfite                      | B       | A           | A    | X       | A         | A        | A        | A      | X       | X       | X             | X      | X    | B        | B         | A         | X          |
| Calcium Thiosulfate                  | C       | A           | A    | D       | A         | A        | A        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Calgon                               | A       | A           | A    | D       | A         | D        | A        | A      | X       | X       | A             | A      | X    | X        | D         | A         | X          |
| Cane Juice                           | B       | A           | A    | X       | A         | D        | A        | A      | X       | X       | B/22          | A      | B    | B        | A         | A         | X          |
| Cane Sugar Liquors                   | A       | A           | A    | B       | A         | D        | A        | A      | X       | X       | A             | X      | A    | A        | B         | A         | X          |
| Capryl Alcohol (Octanol)             | B       | A           | A    | X       | D         | D        | A        | B      | X       | X       | X             | X      | X    | A        | A         | A         | A          |

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|---------------------------------|---------|-------------|------|---------|-----------|----------|----------|--------|---------|---------|---------------|--------|------|-----------|-----------|-----------|------------|
| Caprylic Acid (Octanoic acid)   | C       | A           | A    | X       | X         | X        | A        | A      | X       | X       | X             | X      | A    | A         | X         | A         | A          |
| Caproic Aldehyde                | X       | X           | A    | X       | X         | X        | X        | D      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Carbamate                       | D       | A           | A    | X       | B         | D        | B        | A      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Carbitol                        | C       | B           | A    | X       | B         | D        | B        | A      | X       | X       | C             | X      | A    | B         | B         | B         | X          |
| Carbolic Acid (Phenol)          | D       | A           | A    | D       | C         | C        | C        | A      | B       | D       | B             | D      | A/21 | B         | D         | A         | A          |
| Carbon Bisulfide                | D       | D           | A    | B       | D         | C        | D        | A      | D       | X       | D             | B      | A    | A         | B         | B         | B          |
| Carbon Dioxide                  | B       | A           | A    | C       | A         | C        | A        | B      | C       | A       | A             | A      | A    | A         | D         | A         | A          |
| Carbon Disulfide                | D       | D           | A    | C       | D         | C        | D        | A      | D       | X       | D             | B      | A/21 | A         | B         | B         | B          |
| Carbon Monoxide                 | A       | A           | A    | A       | B         | A        | C        | A      | C       | X       | A             | B      | A    | A         | A         | A         | A          |
| Carbon Tetrachloride - Pure     | D       | D           | A    | D       | D         | A        | D        | A      | D       | X       | B/21          | A      | A    | D         | C         | A         | A          |
| Carbonated Beverages            | A       | A           | A    | X       | A         | B        | A        | A      | X       | X       | A             | X      | A    | C         | D         | A         | A          |
| Carbonic Acid                   | B       | A           | A    | C       | A         | C        | A        | A      | B       | A       | A             | A      | A    | D         | B         | A         | X          |
| Casein                          | X       | A           | A    | X       | A         | X        | A        | A      | X       | X       | X             | X      | X    | B         | X         | B         | B          |
| Casing Head Gas                 | X       | X           | A    | X       | A         | X        | X        | X      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Castor Oil                      | B       | B           | A    | C       | A         | A        | B        | A      | X       | X       | X             | X      | X    | A         | B         | A         | A          |
| Catsup (Ketchup)                | A       | A           | A    | X       | D         | D        | X        | A      | A       | X       | A             | B      | X    | D         | D         | A         | A          |
| Cellosolve (Glycol ethers)      | D       | C           | A    | D       | D         | D        | B        | D      | X       | X       | A             | A      | A    | B         | B         | B         | A          |
| Cellosolve, Acetate             | D       | A           | A    | D       | D         | D        | B        | D      | C       | X       | A             | A      | A/49 | B         | B         | A         | A          |
| Cellosolve, Butyl               | D       | C           | A    | D       | D         | D        | B        | D      | X       | X       | X             | A      | B    | X         | X         | X         | X          |
| Cellguard                       | B       | B           | A    | X       | A         | D        | A        | B      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Cellutherm 2505A                | C       | D           | A    | D       | D         | D        | D        | A      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Cetane (Hexadecane)             | B       | D           | A    | D       | B         | D        | D        | A      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| China Wood Oil(Tung Oil)        | B       | B           | A    | B       | A         | C        | D        | A      | X       | X       | A             | A      | A    | A         | A         | A         | A          |
| Chloracetaldehyde               | X       | X           | A    | X       | D         | D        | A        | D      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Chlorate of Lime                | D       | D           | A    | D       | D         | D        | A        | A      | A       | X       | X             | X      | X    | X         | X         | X         | X          |
| Chlorbenzol (Conc. Pure)        | D       | D           | A    | X       | D         | X        | D        | D      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Chlorextol                      | X       | X           | A    | X       | B         | D        | D        | A      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Chlorinated Lime - 35% (Bleach) | C       | A           | A    | C       | D         | D        | A        | A      | A       | X       | B             | D      | A    | D         | D         | A         | A          |
| Chlorinated Water - Saturated   | D       | D           | A    | D       | C         | D        | D        | A      | A       | X       | B             | D      | A    | C         | X         | B         | A          |
| "Chlorine, Dry"                 | D       | C           | A    | D       | D         | D        | D        | A/21   | B       | X       | B             | D      | A    | D         | D         | D         | A          |
| "Chlorine, Wet"                 | D       | C           | A    | D       | D         | D        | A        | A      | B       | D       | D             | D      | A    | D         | B         | B         | A          |
| "Chlorine, Anhydrous Liquid"    | D       | D           | A    | D       | D         | D        | D        | A      | D       | X       | D             | D      | A    | D         | D         | D         | A          |
| Chlorine Dioxide                | D       | D           | A    | D       | D         | D        | C        | B      | D       | X       | D             | X      | A    | D         | D         | D         | A          |
| Chlorine Trifluoride            | D       | D           | A    | X       | D         | D        | D        | D      | D       | X       | D             | X      | X    | D         | D         | A         | X          |
| Chloroacetic Acid               | C       | D           | A    | X       | D         | D        | B        | D      | D       | X       | X             | X      | X    | X         | X         | X         | X          |
| Chloroacetone                   | D       | C           | A    | D       | C         | D        | D        | B      | X       | X       | D             | B      | X    | D         | B         | B         | B          |
| Chlorobenzene                   | C       | C           | A    | D       | D         | D        | D        | A      | B       | X       | B             | A      | A/21 | D         | B/21      | B         | A          |
| Chlorobromo Methane             | D       | D           | A    | D       | D         | D        | B        | A      | D       | X       | D             | B      | X    | D         | B         | B         | X          |
| Chlorobutadiene                 | D       | C           | A    | D       | D         | D        | D        | A      | X       | X       | D             | X      | X    | D         | B         | A         | B          |
| Chlorodane                      | D       | C           | A    | D       | D         | D        | D        | A      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Chlorododecane                  | D       | D           | A    | D       | D         | D        | D        | A      | X       | X       | D             | X      | X    | D         | D         | X         | X          |
| Chloroform                      | C       | C           | A    | C       | D         | D        | D        | A      | D       | X       | D             | A      | A    | D         | D         | A         | B          |
| 0 - Chloronaphthalene           | D       | D           | A    | D       | D         | D        | D        | A      | C       | X       | D             | X      | A    | D         | B         | B         | B          |
| 1 - Chlorol 1 Nitro Ethane      | D       | C           | A    | D       | D         | D        | D        | D      | X       | X       | D             | X      | X    | D         | X         | X         | X          |
| Chlorosulfonic Acid (Dry)       | C       | C           | A    | C       | D         | D        | C        | C      | D       | X       | C             | D      | C    | D         | D         | D         | B          |

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|------------------------------|---------|-------------|------|---------|-----------|----------|----------|--------|---------|---------|---------------|--------|------|----------|-----------|-----------|------------|
| Chlorosulfonic Acid (Wet)    | D       | D           | A    | D       | D         | D        | D        | D      | D       | X       | C             | D      | C    | D        | D         | D         | B          |
| Chlorotoluene                | D       | C           | A    | D       | D         | D        | D        | A      | X       | X       | D             | A      | X    | D        | B         | B         | A          |
| O - Chlorophenol             | C       | C           | A    | X       | D         | D        | D        | B      | X       | X       | X             | B      | A    | C        | C         | A         | A          |
| Chromic Acid - 5%            | D       | A           | A    | D       | D         | D        | A        | A      | A       | X       | A/21          | D      | A    | C        | D         | A         | A          |
| Chromic Acid - 50%           | D       | A           | A    | D       | D         | D        | C        | A      | A       | X       | B/60          | D      | A    | C        | D         | B         | A          |
| Cider (Apple Juice)          | B       | A           | A/50 | D       | A         | D        | A        | A      | A       | X       | X             | A      | X    | B        | D         | A         | A          |
| Cinnamon Oil                 | X       | C           | A    | X       | C         | X        | X        | X      | X       | X       | X             | X      | X    | X        | D         | A         | X          |
| Citric Acid - 5% Solution    | A       | A/21        | A    | B/21    | A         | A/21     | A        | A      | A       | X       | A             | C      | A    | C        | D         | A         | A          |
| Citric Oils                  | B       | C           | A    | X       | D         | X        | B        | A      | A       | X       | A             | B      | X    | C        | D         | A         | X          |
| Citrus Pectin Liquor         | B       | X           | A    | B       | A         | C        | X        | C      | D       | X       | X             | X      | X    | X        | X         | A         | X          |
| Clove Oil                    | X       | C           | A    | X       | X         | X        | X        | X      | X       | X       | X             | X      | X    | X        | D         | A         | X          |
| Coal Gas                     | X       | X           | A    | B       | A         | B        | A        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Coal Tars                    | D       | D           | A    | D       | C         | D        | D        | A      | X       | X       | C             | D      | X    | X        | X         | X         | A          |
| Cobalt Chloride              | A       | A           | A    | X       | A         | D        | C        | A      | X       | X       | A             | X      | X    | D        | D         | X         | X          |
| Coca Cola Syrup              | B       | A           | A    | X       | B         | B        | A        | B      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Coconut Oil (Coconut Butter) | B       | B           | A    | X       | C/60      | C        | B        | A      | A       | X       | X             | X      | X    | B        | A         | A         | X          |
| Cod Liver Oil (Fish Oil)     | X       | C           | A    | X       | B/21      | A        | A        | A      | A       | X       | X             | X      | X    | A        | D         | A         | X          |
| Coffee                       | A       | A           | A    | X       | A         | D        | A        | A      | A       | X       | A             | A      | X    | A        | X         | A         | A          |
| Coke Oven Gas                | D       | B           | A    | X       | C         | D        | D        | A      | A       | X       | X             | X      | A    | X        | X         | X         | X          |
| Coliche Liquors              | B       | B           | A    | X       | A         | X        | B        | X      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Convelex 10                  | D       | D           | A    | D       | D         | D        | X        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Coolanol (Monsanto)          | B       | D           | X    | X       | B         | D        | D        | A      | X       | X       | X             | A      | A    | D        | D         | C         | B          |
| Copper Acetate               | X       | A           | A    | D       | B         | D        | A        | D      | X       | X       | X             | A      | A    | D        | D         | C         | B          |
| Copper Chloride - 1%         | A       | A           | A    | A       | A         | D        | A        | A      | A       | X       | A             | A      | A    | D        | D         | D         | B          |
| Copper Cyanide               | A       | A           | A    | A       | A         | A        | A        | A      | A       | X       | A             | A      | A    | D        | D         | A         | A          |
| Copper Fluoborate            | X       | A           | A    | A       | A         | A        | X        | A      | X       | X       | X             | B      | X    | D        | D         | D         | B          |
| Copper Nitrate               | B       | A           | A    | A       | A/60      | B/21     | A        | A      | A       | A       | A             | A      | A    | D        | D         | A         | A          |
| Copper Sulfate - 5% Solution | A       | A           | A    | A       | A         | A        | A        | A      | A       | X       | A             | D      | A    | D        | D         | A         | A          |
| Corn Oil                     | B       | D           | A    | A       | C         | A        | D        | A      | A       | A       | A             | X      | A    | B        | C         | B         | X          |
| Cottonseed Oil               | B       | B           | A    | A/21    | C         | A/21     | A/21     | A      | X       | X       | A             | B      | A    | A        | C         | A         | X          |
| Creosols                     | D       | C           | A    | X       | D         | D        | D        | A      | D       | X       | D             | B      | A/66 | B        | C         | A         | B          |
| "Creosote, Coal Tar"         | D       | D           | A    | D       | D         | D        | D        | A      | D       | X       | D             | D      | X    | B        | B         | B         | B          |
| "Creosote, Wood"             | D       | D           | A    | D       | C         | C        | D        | A      | D       | X       | D             | D      | X    | X        | X         | B         | X          |
| Cresylic Acid (Cresol)       | D       | B           | A    | D       | D         | D        | D        | A      | D       | X       | C             | D      | A/66 | C        | A         | A         | B          |
| Crotonaldehyde               | X       | B           | A    | X       | D         | D        | A        | D      | X       | X       | X             | X      | X    | A        | A         | A         | A          |
| Crude Oil                    | C       | C           | A    | B       | B         | D        | D        | A      | B       | X       | B/66          | D      | A/49 | A        | A         | A         | B          |
| Cumene (Isopropylbenzene)    | D       | D           | A    | X       | D         | D        | D        | A      | A       | X       | X             | X      | X    | B        | B         | B         | B          |
| Cutting Oil (Water Soluble)  | C       | D           | A    | X       | D         | A        | D        | A      | A       | X       | X             | X      | X    | A        | A         | A         | A          |
| Cutting Oil (Sulfur Base)    | B       | D           | A    | X       | C         | A        | D        | A      | A       | X       | X             | X      | X    | A        | A         | A         | A          |
| Cyclohexane                  | A       | C           | A    | A       | D         | B        | D        | A      | A       | X       | C/21          | A      | A    | A        | B         | A         | B          |
| Cyclohexanol                 | C       | D           | A    | X       | A         | B        | C        | A      | A       | X       | B/21          | A      | A/66 | C        | B         | B         | A          |
| Cyclohexanone                | D       | D           | A    | D       | D         | D        | C        | D      | B       | X       | D             | A      | B/21 | B        | B         | B         | B          |
| Cyanic Acid                  | D       | B           | A    | X       | D         | D        | A        | D      | A       | X       | X             | D      | X    | X        | D         | A         | X          |
| P-Cymene                     | D       | B           | A    | X       | D         | D        | D        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Decalin                      | D       | C           | A    | X       | D         | D        | D        | A      | C       | X       | B/49          | X      | A/79 | X        | X         | X         | X          |

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|--------------------------------|---------|-------------|------|---------|-----------|----------|----------|--------|---------|---------|---------------|--------|------|-----------|-----------|-----------|------------|
| Decanal                        | X       | D           | A    | X       | D         | X        | D        | D      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Decane                         | A       | B           | A    | X       | D         | B        | D        | A      | X       | X       | A/21          | X      | A    | X         | X         | X         | X          |
| Decyl Alcohol (Decanol)        | X       | X           | A    | X       | D         | D        | X        | B      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| De-Ionized Water               | A       | A           | A    | A       | A         | X        | A        | A      | A       | X       | A             | X      | A    | A         | C         | A         | A          |
| Degreasing Fluid (Chlorinated) | D       | D           | A    | X       | D         | A        | D        | A      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Denatured Alcohol              | A       | B           | A    | X       | A         | D        | A        | B      | X       | X       | A             | A      | A    | A         | A         | A         | A          |
| Detergent Solutions            | B       | B           | A    | B       | B         | A        | A        | A      | A       | X       | A             | A      | A    | A         | A         | A         | X          |
| Developing Fluids (Photo)      | X       | A           | A    | D       | A         | D        | B        | A      | A       | X       | X             | A      | X    | X         | D         | A         | A          |
| Dextrose                       | A       | A           | A    | B/60    | B         | A        | A        | A      | A       | X       | A             | X      | A    | A         | D         | A         | A          |
| Dextron                        | C       | D           | A    | X       | B         | B        | D        | A      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Diacetone Alcohol (Diacetol)   | D       | B           | A    | C       | D         | D        | A        | D      | X       | X       | B             | A      | A/21 | A         | A         | A         | A          |
| Diamylamine                    | X       | B           | A    | X       | D         | D        | A        | D      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Diazinon                       | D       | D           | A    | D       | C         | D        | D        | B      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Dibenzyl Ether                 | X       | C           | A    | X       | D         | B        | C        | C      | X       | X       | X             | X      | C    | B         | B         | B         | B          |
| Dibenzyl Sebacate              | D       | C           | A    | X       | D         | B        | B        | B      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Dibromoethyl Benzene           | D       | C           | A    | X       | D         | D        | D        | A      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Dibutyl Amine                  | D       | C           | A    | X       | D         | D        | D        | B      | X       | X       | D             | X      | B    | X         | X         | X         | X          |
| Dibutyl Ether                  | D       | B           | A    | X       | D         | D        | C        | C      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Dibutyl Phthalate              | B       | B           | A    | A       | D         | C        | A        | B      | A       | A       | B             | X      | D    | A         | A         | A         | A          |
| Dibutyl Sebacate               | D       | B           | A    | A       | D         | D        | B        | B      | X       | X       | B/22          | X      | D    | X         | A         | A         | X          |
| Dichloroacetic Acid            | X       | B           | A    | X       | D         | X        | C        | D      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Dichlorethane                  | D       | D           | A    | D       | D         | D        | D        | B      | C       | X       | A             | A      | A/21 | X         | D         | A         | B          |
| P-Dichlorobenzene              | D       | D           | A    | D       | D         | D        | D        | A      | D       | X       | B             | B      | A/66 | D         | B         | B         | A          |
| Dichlorobutane                 | X       | X           | A    | X       | D         | D        | D        | A      | X       | X       | X             | X      | X    | D         | B         | B         | X          |
| Dichloroethyl Ether            | X       | X           | A    | X       | X         | X        | X        | X      | X       | X       | X             | X      | X    | B         | X         | X         | X          |
| Dichloro Isopropyl Ether       | D       | D           | A    | D       | D         | B        | C        | C      | X       | X       | D             | X      | X    | D         | X         | X         | X          |
| Dichloropentane                | D       | D           | A    | X       | D         | D        | D        | A      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Dicyclohexylamine              | D       | B           | A    | X       | D         | D        | D        | D      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Diesel Oil (Fuel ASTM #2)      | B       | D           | A    | B       | D         | B        | D        | A      | D       | X       | B/21          | A      | A    | A         | A         | A         | A          |
| Di-Ester Lubricant Mil-L-7808  | C       | D           | A    | X       | D         | D        | D        | A      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Di-Ester Synthetic Lubricants  | D       | D           | A    | D       | D         | D        | D        | A      | X       | X       | X             | X      | X    | A         | A         | A         | A          |
| Diethanol Amine                | D       | X           | A    | D       | D         | D        | A        | D      | X       | X       | A             | X      | X    | A         | A         | A         | A          |
| Diethyl Amine                  | D       | C           | A    | X       | B         | C        | B        | D      | X       | X       | A             | X      | A/21 | B         | D         | B         | X          |
| Diethyl Aniline                | D       | B           | A    | X       | D         | D        | B        | C      | X       | X       | A             | X      | A    | X         | X         | X         | X          |
| Diethyl Benzene                | D       | C           | A    | X       | D         | D        | D        | A      | D       | X       | X             | X      | X    | X         | X         | X         | X          |
| Diethyl Carbonate              | D       | D           | A    | X       | D         | D        | D        | A      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Diethyl Ether                  | D       | B           | A    | C       | D         | A        | D        | D      | D       | X       | D             | A      | A/21 | B         | B         | B         | B          |
| Diethyl Phthalate (Dep)        | B       | A           | A    | A       | X         | X        | X        | C      | X       | X       | X             | X      | X    | A         | A         | A         | A          |
| Diethyl Sebacate               | B       | B           | A    | A       | D         | D        | B        | A      | X       | X       | A/49          | X      | A/49 | A         | A         | A         | A          |
| Diethyl Sulfate                | D       | B           | A    | X       | A         | D        | A        | D      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Diethylene Ether (Dioxane)     | D       | D           | A    | X       | X         | X        | D        | X      | X       | X       | X             | X      | X    | A         | A         | A         | X          |
| Diethylene Glycol              | A       | A           | A    | A       | A         | D        | A        | A      | A       | X       | A             | D      | X    | A         | A         | A         | A          |
| Diethylene Triamine            | D       | B           | A    | X       | D         | D        | A        | D      | X       | X       | X             | X      | X    | A         | A         | A         | A          |
| Difluorodibromomethane         | D       | B           | A    | D       | D         | D        | B        | X      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Diisobutyl Ketone              | D       | B           | A    | X       | D         | D        | A        | D      | X       | X       | X             | X      | X    | A         | A         | A         | A          |

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|------------------------------|---------|-------------|------|---------|-----------|----------|----------|--------|---------|---------|---------------|--------|------|----------|-----------|-----------|------------|
| Diisobutylene                | C       | C           | A    | D       | C         | D        | D        | A      | A       | X       | A/49          | A      | A    | B        | B         | B         | X          |
| Diisodecyl Adipate (D10A)    | X       | X           | A    | X       | X         | X        | X        | C      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Diisodecyl Phthalate (D10P)  | X       | X           | A    | X       | D         | X        | A        | C      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Diisooctyl Adipate (D10A)    | X       | X           | A    | X       | X         | X        | X        | C      | X       | X       | X             | X      | X    | A        | A         | A         | A          |
| Diisooctyl Phthalate (D10P)  | D       | C           | A    | X       | X         | X        | B        | C      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Diisooctyl Sebacate          | D       | D           | A    | X       | D         | D        | C        | B      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Diisopropyl Amine            | C       | X           | A    | X       | X         | X        | X        | X      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Diisopropyl Benzene          | D       | C           | A    | D       | D         | D        | D        | A      | X       | X       | X             | A      | X    | X        | X         | X         | X          |
| Diisopropyl Ketone           | D       | C           | A    | X       | D         | D        | A        | D      | X       | X       | X             | A      | A    | X        | X         | A         | X          |
| Dimethylaniline              | D       | B           | A    | X       | D         | D        | B        | C      | A       | X       | A             | D      | A/21 | A        | X         | X         | B          |
| Diemethyl Formamide          | C       | A           | A    | B       | D         | D        | B        | D      | A       | X       | A/49          | C      | D    | A        | A         | A         | A          |
| Diemethyl Phthalate          | D       | A           | A    | A       | D         | D        | B        | A      | X       | X       | A             | X      | A/21 | A        | A         | A         | A          |
| Dipentene                    | C       | C           | A    | X       | D         | D        | D        | A      | X       | X       | X             | X      | X    | A        | A         | A         | A          |
| Diphenyl                     | D       | C           | A    | X       | D         | D        | D        | A      | X       | X       | X             | X      | A/49 | A        | A         | A         | A          |
| Diphenyl Oxides              | D       | C           | A    | X       | D         | D        | D        | A      | X       | X       | X             | D      | A    | B        | A         | A         | B          |
| Dipropylamine                | X       | X           | A    | X       | X         | X        | X        | X      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Dipropylene Glycol           | A       | A           | A    | X       | X         | X        | X        | A      | X       | X       | A             | X      | A    | X        | X         | X         | X          |
| Dipropyl Ketone (Butyrene)   | D       | X           | A    | D       | X         | X        | X        | D      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Dispersing Oil #10           | D       | X           | A    | X       | D         | X        | D        | C      | X       | X       | X             | X      | X    | A        | A         | A         | A          |
| Divinyl Benzene (DVB)        | D       | D           | A    | X       | D         | X        | D        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Dodecyl Benzene (Alkane)     | D       | X           | A    | X       | X         | X        | X        | A      | X       | X       | X             | X      | X    | A        | A         | A         | X          |
| Dow (Silicones)              | A       | A           | A    | B       | A         | A        | A        | A      | X       | X       | X             | X      | X    | A        | X         | X         | X          |
| Dowtherm A                   | D       | D           | A    | B       | D         | D        | D        | A      | X       | X       | B             | X      | X    | C        | B         | A         | X          |
| Dowtherm E                   | D       | D           | X    | B       | D         | D        | D        | A      | X       | X       | B             | X      | X    | X        | X         | X         | X          |
| Dry Cleaning Fluid           | D       | D           | A    | X       | D         | D        | D        | A      | D       | X       | D             | X      | A    | A        | A         | A         | X          |
| DTE Light Oil                | B       | D           | B    | B       | B         | D        | D        | A      | A       | X       | X             | X      | X    | X        | X         | X         | X          |
| Epichlorohydrin              | D       | B           | A    | D       | D         | D        | C        | D      | X       | X       | A             | A      | C    | D        | A         | A         | A          |
| Epsom Salts                  | A       | A           | A    | X       | A         | X        | A        | A      | A       | X       | A             | B      | A    | A        | A         | A         | B          |
| Esam-6 Fluid                 | X       | B           | X    | X       | B         | X        | A        | D      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| "Esstic 42, 43"              | A       | D           | X    | D       | B         | B        | D        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Ethane                       | C       | C           | A    | X       | B/21      | B/21     | D        | A      | X       | X       | C             | A      | X    | A        | A         | A         | A          |
| Ethanol (Ethyl Alcohol)      | A       | A           | A    | A       | A         | D        | A        | A      | A       | X       | A             | A      | A    | B        | A         | A         | A          |
| Ethanolamine (Aminoethanol)  | B       | A           | A    | X       | B         | C        | B        | D      | A       | X       | B             | D      | C    | B        | B         | A         | B          |
| Ethanol Chloride             | D       | B           | A    | X       | D         | X        | C        | B      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Ethers                       | D       | C           | A    | X       | D         | D        | C        | D      | D       | A       | C             | A      | A/21 | A        | C         | A         | B          |
| Ethyl Acetate                | D       | A           | A    | B       | D         | D        | B        | D      | B       | X       | A             | A/49   | A    | B        | A         | A         | B          |
| Ethyl Acetoacetate           | D       | B           | A    | D       | D         | D        | A        | D      | A       | X       | X             | A      | A/21 | A        | A         | A         | A          |
| Ethyl Acrylate               | D       | C           | A    | X       | D         | D        | B        | D      | X       | X       | D             | A      | C    | A        | A         | A         | A          |
| Ethylacrylic Acid            | D       | C           | A    | X       | B         | D        | B        | D      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Ethyl Alcohol (Ethanol)      | A       | A           | A    | A       | A         | D        | A        | A/21   | A       | X       | A             | X      | A    | B        | B         | A         | A          |
| Ethyl Aluminium Dichloride   | D       | X           | A    | X       | X         | X        | X        | B      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Ethyl Amine (Monoethylamine) | X       | X           | A    | X       | D         | D        | A        | D      | X       | X       | X             | X      | X    | B        | B         | A         | X          |
| Ethyl Benzene                | D       | D           | A    | X       | D         | D        | D        | A      | A       | X       | D             | A      | C    | A        | B         | B         | A          |
| Ethyl Benzoate               | D       | C           | A    | X       | D         | D        | D        | A      | X       | X       | B/21          | A      | X    | A        | A         | A         | A          |
| Ethyl Bromide                | C       | X           | A    | X       | D         | D        | D        | A      | X       | X       | D             | X      | X    | A        | A         | A         | X          |

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|------------------------------------|---------|-------------|------|---------|-----------|----------|----------|--------|---------|---------|---------------|--------|------|-----------|-----------|-----------|------------|
| Ethyl Butyl Acetate                | D       | X           | A    | X       | X         | X        | X        | D      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Ethyl Butyl Alcohol                | A       | X           | A    | D       | X         | D        | X        | B      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Ethyl Butyl Ketone                 | D       | X           | A    | X       | X         | X        | X        | D      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Ethyl Butyraldehyde                | D       | X           | A    | X       | X         | X        | X        | D      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Ethyl Butyrate                     | D       | X           | A    | X       | D         | X        | D        | C      | C       | X       | B/21          | X      | X    | B         | A         | A         | A          |
| Ethyl Caprylate                    | D       | X           | A    | X       | D         | X        | D        | X      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Ethyl Cellosolve                   | C       | B           | A    | X       | D         | D        | B        | D      | X       | X       | X             | A      | X    | X         | X         | X         | X          |
| Ethyl Cellulose                    | B       | A           | A    | B       | B         | B        | B        | D      | X       | X       | X             | A      | X    | B         | A         | B         | B          |
| Ethyl Chloride                     | C       | D           | A    | C       | D         | C        | A/60     | A      | D       | X       | D             | A      | A    | D         | C         | A         | B          |
| Ethyl Chlorocarbonate              | D       | A           | A    | D       | D         | D        | D        | A      | X       | X       | X             | A      | X    | D         | A         | X         | X          |
| Ethyl Chloroformate                | D       | C           | A    | D       | D         | D        | D        | A      | X       | X       | D             | A      | X    | D         | X         | X         | X          |
| Ethyl Cyanide (Propionitrile)      | D       | X           | A    | X       | B         | X        | A        | D      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Ethylcyclopentane                  | X       | X           | X    | X       | C         | A        | D        | A      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Ethyl Ether                        | D       | D           | A    | X       | D         | D        | D        | D      | D       | X       | C/21          | A/21   | B/77 | B         | B         | A         | B          |
| Ethyl Formate                      | D       | B           | A    | D       | B         | X        | B        | A      | C       | X       | X             | A      | X    | C         | A         | B         | B          |
| Ethyl Hexyl Acetate                | X       | X           | A    | D       | X         | X        | X        | D      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Ethyl Hexyl Alcohol (Ethylhexanol) | A       | A           | A    | D       | A         | D        | A        | A      | X       | X       | X             | X      | X    | A         | A         | A         | A          |
| Ethyl Iodide                       | X       | X           | A    | X       | D         | X        | C        | B      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Ethyl Isobutyrate                  | X       | X           | A    | X       | D         | X        | D        | X      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Ethyl Mercaptan                    | D       | C           | A    | X       | D         | A        | D        | B      | X       | X       | X             | X      | X    | B         | A         | B         | B          |
| Ethyl Oxalate                      | D       | B           | A    | D       | D         | A        | A        | B      | X       | X       | X             | X      | X    | A         | X         | X         | X          |
| Ethyl Pentachlorobenzene           | D       | D           | A    | X       | D         | C        | D        | A      | X       | X       | D             | X      | X    | D         | X         | X         | X          |
| Ethyl Propionate                   | D       | D           | A    | D       | D         | X        | D        | X      | X       | X       | X             | X      | X    | A         | A         | A         | A          |
| Ethyl Silicate                     | B       | B           | A    | B       | A         | D        | A        | A      | X       | X       | X             | X      | X    | B         | A         | A         | A          |
| Ethyl Sulfate                      | D       | B           | A    | X       | A         | D        | A        | D      | X       | X       | X             | X      | X    | X         | X         | D         | X          |
| Ethylene (Ethene)                  | B       | C           | A    | D       | C         | B        | D        | A      | X       | X       | X             | A      | X    | A         | A         | A         | X          |
| Ethylene Chloride                  | D       | D           | A    | C       | D         | D        | C        | C      | C       | X       | C/21          | A      | A    | B         | C         | A         | B          |
| Ethylene Chlorohydrin              | D       | C           | A    | D       | B         | D        | B        | A      | X       | X       | D             | C/21   | A/21 | B         | B         | B         | X          |
| Ethylene Diamine                   | B       | A           | A    | X       | A         | D        | A        | D      | A       | X       | A             | A      | B/21 | A         | A         | A         | C          |
| Ethylene Dibromide                 | D       | D           | A    | X       | D         | D        | D        | A      | X       | X       | B/21          | X      | A    | D         | B         | A         | B          |
| Ethylene Dichloride                | C       | C           | A    | C       | D         | D        | D        | B      | D       | A       | D             | A      | A    | B         | A         | A         | A          |
| Ethylene Glycol                    | A       | A           | A    | A/21    | A         | B        | A        | A      | A       | X       | A             | B      | A    | B         | B         | A         | A          |
| Ethylene Oxide                     | A       | A           | A    | A       | D         | D        | B        | D      | X       | X       | C/52          | A      | A/21 | D         | C         | A         | X          |
| Ethylene Trichloride               | X       | X           | A    | X       | D         | D        | D        | A      | X       | X       | D             | X      | A    | D         | A         | A         | X          |
| Ethylidene Chloride                | D       | D           | A    | X       | D         | X        | D        | X      | X       | X       | X             | X      | X    | D         | B         | A         | B          |
| Fatty Acids                        | B       | B           | A    | D       | B/21      | D        | D        | A      | A       | A       | B/60          | B      | A    | B         | D         | A         | A          |
| Ferric Chloride                    | A       | A           | A    | B/60    | A/60      | A/21     | A/27     | A/27   | D       | A       | A             | X      | A    | D         | D         | D         | B          |
| Ferric Hydroxide                   | B       | B           | A    | X       | B         | X        | B        | B      | X       | X       | X             | X      | X    | X         | X         | A         | B          |
| Ferric Nitrate                     | A       | A           | A    | D       | B         | A/21     | A        | A      | A       | A       | A             | A      | A    | D         | D         | A         | A          |
| Ferric Sulfate                     | A       | A           | A    | A       | A         | A        | A        | A      | A       | X       | A             | B      | A    | D         | D         | A         | A          |
| Ferrous Chloride                   | B       | A           | A    | A       | A         | D        | A        | A      | A       | X       | A             | B      | A    | D         | D         | D         | B          |
| Ferrous Sulfate (Copperas)         | A       | A           | A    | A       | A         | A        | A        | A      | A       | X       | A             | B/21   | A    | D         | D         | A         | B          |
| Fish Oil                           | A       | B           | A    | B       | B         | B        | D        | A      | A       | X       | X             | X      | X    | X         | X         | X         | X          |
| Fluorine (Anhydrous)               | D       | D           | B    | D       | D         | D        | D        | B      | X       | X       | D             | A      | A/21 | D         | D         | A         | B          |
| Fluorboric Acid                    | A       | A           | A    | D       | A         | D        | A        | A      | A       | X       | A             | X      | A    | D         | D         | B         | A          |



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|-----------------------------------|---------|-------------|------|---------|-----------|----------|----------|--------|---------|---------|---------------|--------|------|----------|-----------|-----------|------------|
| Fluorobenzene                     | D       | C           | A    | X       | D         | X        | D        | A      | X       | X       | D             | A      | X    | D        | X         | X         | X          |
| Fluorocarbon Oil                  | D       | D           | A    | X       | A         | X        | A        | X      | X       | X       | D             | X      | X    | D        | A         | A         | A          |
| Fluorochloroethylene              | D       | C           | A    | X       | D         | X        | D        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Fluorinated Cyclic Ethers         | D       | D           | A    | X       | D         | X        | A        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Fluorolube (Fluoro Carbonoil)     | X       | X           | A    | D       | A         | X        | A        | B      | X       | X       | D             | X      | X    | A        | A         | A         | A          |
| Fluorosulfonic Acid               | X       | X           | X    | X       | X         | X        | X        | X      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Fuosillicic Acid                  | A       | A           | A    | B       | A         | B        | B        | A/60   | A       | X       | A             | X      | A    | D        | D         | B         | B          |
| Formaldehyde                      | A       | A/21        | A    | B       | B         | D        | A        | A      | A       | X       | A             | A      | A    | A        | D         | A         | B          |
| Formamide                         | A       | A           | A    | D       | A         | X        | A        | D      | X       | X       | X             | X      | X    | A        | B         | B         | B          |
| Formic Acid                       | A       | A           | A    | B       | D         | D        | B        | B      | A       | X       | A             | D      | A    | D        | D         | A         | A          |
| Freon 11                          | C       | B           | A    | A       | B         | D        | D        | C      | X       | X       | D             | A      | A    | C        | A         | A         | A          |
| Freon 12                          | C       | D           | A    | A       | A         | A/54     | B        | B      | X       | X       | B             | A      | A    | A        | A         | A         | A          |
| Freon 13                          | D       | X           | A    | C       | A         | C/21     | A        | A      | X       | X       | D             | A      | A    | A        | A         | A         | A          |
| Freon 13BI                        | D       | X           | A    | X       | A         | A        | A        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Freon 14                          | A       | X           | A    | X       | A         | A/77     | A        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Freon 21                          | D       | X           | A    | X       | D         | X        | D        | D      | X       | X       | D             | A      | A    | D        | X         | X         | X          |
| Freon 22                          | D       | D           | A    | D       | A         | D        | A        | D      | X       | X       | D             | A      | A    | D        | D         | A         | A          |
| Freon 31                          | D       | X           | A    | X       | A         | X        | A        | D      | X       | X       | X             | A      | X    | D        | X         | X         | X          |
| Freon 32                          | D       | X           | A    | X       | A         | X        | A        | D      | X       | X       | X             | A      | X    | D        | X         | X         | X          |
| Freon 112                         | B       | X           | A    | X       | B         | B/21     | D        | A      | X       | X       | X             | A      | X    | D        | X         | X         | X          |
| Freon 113                         | D       | D           | A    | A       | A         | B        | D        | B      | X       | X       | D             | A      | A    | D        | X         | A         | A          |
| Freon 114                         | B       | X           | A    | A       | A         | A/21     | D        | A      | X       | X       | D             | A      | A    | C        | X         | A         | X          |
| Freon114B2                        | X       | X           | A    | X       | A         | X        | D        | B      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Freon 142b                        | X       | X           | A    | X       | A         | X        | A        | D      | X       | X       | X             | A      | X    | D        | X         | X         | X          |
| Freon 152a                        | X       | X           | X    | X       | X         | X        | X        | X      | X       | X       | X             | A      | X    | C        | X         | X         | X          |
| Freon 152a                        | X       | X           | A    | X       | A         | X        | A        | D      | X       | X       | X             | A      | X    | D        | X         | X         | X          |
| Freon 218                         | X       | X           | A    | X       | A         | X        | X        | A      | X       | X       | X             | A      | X    | D        | X         | X         | X          |
| Freon 502                         | X       | X           | A    | D       | A         | X        | A        | B      | X       | X       | X             | A      | X    | D        | X         | X         | X          |
| Freon, BF                         | X       | X           | A    | X       | B         | X        | D        | A      | X       | X       | X             | X      | X    | D        | X         | X         | X          |
| Freon C316                        | X       | X           | A    | X       | A         | X        | A        | A      | X       | X       | X             | A      | X    | D        | X         | X         | X          |
| Freon C318                        | X       | X           | A    | X       | A         | X        | A        | A      | X       | X       | X             | A      | X    | D        | X         | X         | X          |
| Freon K-142B                      | X       | X           | X    | X       | X         | X        | X        | X      | X       | X       | X             | A      | X    | D        | X         | X         | X          |
| Freon K-152a                      | X       | X           | X    | X       | X         | X        | X        | X      | X       | X       | X             | A      | X    | D        | X         | X         | X          |
| Freon, MF                         | X       | X           | A    | A       | D         | D        | D        | D      | X       | X       | X             | X      | X    | D        | X         | X         | X          |
| Freon, PCA                        | X       | X           | X    | X       | A         | A        | D        | B/21   | X       | X       | X             | X      | X    | D        | X         | X         | X          |
| Freon, TF                         | X       | D           | A    | A       | A         | B        | D        | B      | X       | X       | X             | A      | B    | D        | A         | A         | A          |
| Freon T-WD602                     | X       | X           | A    | X       | B         | A        | B        | A      | X       | X       | X             | X      | X    | D        | X         | X         | X          |
| Freon TMC                         | X       | X           | A    | A       | B         | B        | B        | A      | X       | X       | X             | X      | X    | D        | X         | X         | X          |
| Freon T-P35                       | X       | X           | A    | X       | A         | A        | A        | A      | X       | X       | X             | X      | X    | D        | X         | X         | X          |
| Freon TA                          | X       | X           | A    | X       | A         | A        | A        | C      | X       | X       | X             | X      | X    | D        | X         | X         | X          |
| Freon TC                          | X       | X           | A    | X       | A         | A        | B        | A      | X       | X       | X             | X      | X    | D        | X         | X         | X          |
| Fuel Oil                          | B       | C           | A    | B       | A         | D        | D        | A      | D       | A       | A             | B      | A    | A        | A         | A         | A          |
| Fumaric Acid (Boletic Acid)       | X       | A           | A    | B       | B         | X        | B        | A      | C       | X       | X             | X      | X    | X        | X         | X         | X          |
| Fuming Sulph. Acid (20/50% Oleum) | D       | X           | A    | D       | D         | D        | D        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Furan (Furfuran)                  | D       | A           | A    | X       | D         | X        | D        | D      | X       | X       | C             | X      | D    | A        | A         | A         | X          |

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|--|---------|-------------|------|---------|-----------|----------|----------|--------|---------|---------|---------------|--------|------|----------|-----------|-----------|------------|
| Furfural (Ant Oil)                     | D       | A           | A    | B       | C         | D        | A        | D      | B       | X       | D             | B      | B/49 | A        | B         | A         | B          |
| Furfuryl Alcohol                       | D       | C           | A    | B       | D         | D        | B        | D      | X       | X       | X             | X      | B/38 | A        | A         | A         | A          |
| Furyl Carbinol                         | D       | X           | A    | X       | D         | D        | B        | D      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Fusel Oil (Grain Oil)                  | X       | X           | A    | X       | B         | C/21     | A        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Gallic Acid                            | D       | B           | A    | D       | B         | D        | B        | A      | A       | A       | A             | X      | A/21 | A        | D         | B         | B          |
| Gasoline (Aviation)                    | D       | C           | A/77 | A       | D         | C        | D        | A      | C       | A       | D             | A      | A    | X        | X         | X         | X          |
| Gasoline (Leaded)                      | C       | C           | A    | A       | D         | C        | D        | A      | X       | X       | D             | A      | A    | A        | A         | A         | A          |
| Gasoline (Unleaded)                    | C       | C           | A    | X       | D         | D        | D        | A      | B       | X       | D             | A      | A    | A        | A         | A         | A          |
| Gelatin                                | A       | A           | A    | B       | A         | D        | A        | A      | A       | X       | A             | B      | A    | A        | D         | A         | A          |
| Glacial Acetic Acid                    | D       | A           | A    | D       | D         | D        | A        | D      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Glauber's Salt                         | X       | X           | A    | B       | A         | A        | B        | A      | A       | X       | X             | X      | X    | X        | X         | X         | X          |
| Glucose (Corn Syrup)                   | A       | A           | A    | B       | A         | A        | A        | A      | A       | A       | A             | A      | A    | A        | B         | A         | A          |
| Glue                                   | D       | A           | A    | A       | A         | A        | A        | A      | A       | X       | A             | B      | A    | B        | A         | A         | A          |
| Glycerine - Glycerol                   | A       | A           | A    | A       | A         | D        | A        | A      | A       | A       | A             | A      | A    | A        | B         | A         | A          |
| Glycolic Acid                          | A       | X           | A    | X       | A         | X        | X        | A      | A       | X       | A             | A      | A/21 | X        | X         | X         | A          |
| Grape Juice                            | A       | A           | X    | X       | A         | D        | A        | A      | A       | X       | A             | B      | A    | B        | D         | A         | X          |
| Grapefruit Oil                         | X       | A           | A    | X       | D         | X        | X        | A      | X       | X       | X             | X      | X    | X        | D         | A         | X          |
| Grease (Ester Base)                    | C       | B           | A    | X       | X         | X        | X        | X      | X       | X       | A             | A      | A    | A        | A         | A         | A          |
| Grease (Petroleum Base)                | A       | D           | A    | A       | D         | A        | D        | A      | X       | X       | A             | A      | A    | A        | A         | A         | A          |
| Grease (Silicone Base)                 | A       | B           | A    | X       | X         | X        | X        | X      | X       | X       | A             | A      | A    | A        | A         | A         | A          |
| Green Sulfate Liquor                   | B       | A           | A    | D       | B         | A        | A        | A      | A       | X       | A             | X      | X    | B        | C         | A         | B          |
| Halothane                              | D       | X           | X    | X       | D         | D        | X        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Halowax Oil                            | D       | D           | A    | X       | D         | X        | D        | A      | X       | X       | X             | X      | X    | D        | X         | X         | X          |
| Hannifin Lube A                        | A       | D           | X    | X       | A         | A        | D        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Heavy Water                            | A       | B           | X    | B       | X         | D        | A        | X      | X       | X       | X             | X      | X    | A        | C         | A         | A          |
| HEF - 2 (High Energy Fuel)             | B       | D           | X    | X       | A         | D        | D        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Helium                                 | A       | A           | A    | X       | A         | A        | A        | A      | X       | X       | A             | A      | X    | A        | A         | A         | X          |
| Heptane                                | B       | C           | A    | B       | A         | B        | D        | A      | X       | A       | B/21          | A      | A    | A        | A         | A         | A          |
| N-Hexaldehyde                          | D       | C           | A    | D       | A         | B        | A        | D      | X       | X       | X             | X      | X    | A        | A         | A         | X          |
| Hexane                                 | B       | C           | A    | A       | D         | B        | D        | A      | X       | A       | B/21          | A      | A    | A        | A         | A         | A          |
| Hexanol                                | A       | C           | A    | D       | D         | D        | A        | A      | X       | X       | A/21          | A/21   | X    | A        | A         | A         | A          |
| Hexyl Alcohol                          | B       | B           | A    | D       | B         | D        | A        | B      | A       | X       | X             | X      | A    | A        | A         | A         | X          |
| Hexylene Glycol                        | X       | X           | A    | D       | A         | X        | C/21     | A      | X       | X       | X             | X      | X    | A        | A         | A         | A          |
| Hilo MS #1                             | D       | X           | X    | D       | D         | B        | A        | D      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Houghto-Safe 271 (Water & Glycol Base) | X       | A           | A    | B       | B         | D        | A        | B      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| 620 Water/Glycol                       | B       | A           | A    | A       | B         | B        | A        | B      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| 1010, Phosphate Ester                  | D       | A           | A    | B       | D         | A        | A        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| 1055, Phosphate Ester                  | D       | A           | A    | B       | D         | A        | A        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| 1120, Phosphate                        | D       | A           | A    | B       | D         | A        | A        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| 5040 (Water/Oil Emulsion)              | A       | D           | A    | B       | B         | D        | D        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Hydraulic Oils (Petroleum)             | A       | D           | A    | A       | B         | X        | D        | A      | A       | A       | D             | B      | X    | A        | A         | A         | A          |
| Hydraulic Oils (Synthetic)             | A       | D           | A    | A       | D         | B        | D        | A      | A       | X       | D             | B      | X    | A        | A         | A         | A          |
| Hydrazine (Diamine)                    | D       | A           | A    | D       | B         | D        | A        | D      | X       | X       | C             | B      | A/49 | A        | D         | A         | A          |
| Hydrobromic Acid                       | D       | B           | A    | X       | D         | X        | A        | X      | A       | X       | B             | D      | A    | D        | D         | D         | A          |
| Hydrochloric Acid 20%                  | D       | A           | A    | D       | D         | B        | A        | A      | A       | X       | A             | D      | A    | D        | D         | D         | A          |

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|---------------------------------|---------|-------------|------|---------|-----------|----------|----------|--------|---------|---------|---------------|--------|------|----------|-----------|-----------|------------|
| Hydrochloric Acid 37%           | D       | B           | A    | D       | D         | D        | B        | A      | A       | X       | A             | D      | A    | D        | D         | D         | A          |
| Hydrocyanic Acid                | D       | A           | A    | D       | B         | D        | A        | A      | A       | X       | A             | D      | A    | A        | D         | A         | A          |
| Hydrofluoric Acid 20%           | D       | D           | A    | D       | D         | D        | B        | A      | X       | X       | A             | D      | A    | D        | D         | D         | D          |
| Hydrofluoric Acid 50%           | D       | D           | A    | D       | D         | D        | B        | A      | X       | X       | B/21          | D      | A    | D        | D         | D         | D          |
| Hydrofluoric Acid 75%           | D       | D           | A    | D       | D         | D        | D        | D      | X       | X       | B/21          | D      | A    | D        | D         | D         | D          |
| Hydrofluoric Acid Concentrated  | D       | D           | A    | D       | D         | D        | D        | D      | A       | X       | D             | D      | A    | D        | D         | D         | D          |
| Hydrofluosilicic Acid           | D       | B           | A    | B       | B         | D        | A        | A      | A       | X       | A             | X      | A    | D        | D         | D         | B          |
| Hydrogen                        | A       | A           | A    | A       | A         | A        | B        | A      | A       | X       | X             | X      | X    | X        | X         | X         | X          |
| Hydrogen Chloride Gas           | B       | B           | A    | X       | B         | X        | A        | A      | X       | X       | A/60          | X      | A    | D        | A         | A         | A/52       |
| Hydrogen Cyanide Gas            | A       | A           | A    | D       | D         | D        | A        | A      | X       | X       | A             | X      | A    | D        | A         | B         | X          |
| Hydrogen Fluoride               | D       | X           | B/21 | D       | X         | D        | B/21     | A      | X       | X       | A/21          | X      | X    | D        | X         | D         | A          |
| Hydrogen Peroxide               | C       | A           | A    | D       | D         | C        | C        | A      | A       | X       | A/21          | D      | A/21 | A        | D         | A         | A          |
| Hydrogen Sulfide Dry            | D       | A           | A    | A       | A         | A        | A        | D      | A       | A       | A             | A      | A    | B        | D         | B         | A          |
| Hydrogen Sulfide Wet            | D       | A           | A    | A       | A         | D        | A        | D      | A       | X       | A             | C      | A    | D        | D         | A         | A          |
| Hydrolube-Water/Ethylene Glycol | A       | A/121       | A    | B/66    | B/21      | D        | A/21     | A/21   | X       | X       | A             | D      | A    | A        | A         | A         | A          |
| Hydroquinone                    | C       | A           | A    | X       | D         | X        | D        | C      | A       | X       | A             | A      | A    | A        | B         | B         | B          |
| Hydne                           | B       | D           | A    | X       | B         | X        | A        | D      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Hydroxyacetic Acid              | D       | A           | A    | X       | D         | D        | A/21/38% | D      | X       | X       | X             | C      | X    | D        | B         | B         | X          |
| Hypochlorous Acid               | D       | A           | A    | X       | D         | D        | B        | A      | A       | X       | A             | D      | A    | D        | D         | D         | A          |
| Hypoid Grease (Parapoid 10-C)   | B       | X           | A    | X       | D         | D        | D        | C      | X       | X       | X             | A      | X    | X        | X         | X         | X          |
| Ink (Printers)                  | A       | A           | A    | A       | A         | A        | A        | A      | A       | A       | X             | A      | A    | C        | D         | A         | A          |
| Iodine                          | B       | A           | A    | B       | D         | D        | B        | A      | B       | X       | A             | A      | A/66 | D        | D         | D         | B          |
| Iodine Pentafluoride            | D       | B           | A    | X       | D         | D        | D        | D      | D       | X       | X             | X      | X    | X        | X         | X         | X          |
| Iodoform                        | B       | B           | A    | X       | B         | D        | B        | A      | X       | X       | X             | X      | A    | B        | A         | B         | D          |
| Isoamyl Acetate                 | D       | X           | A    | X       | D         | D        | B        | D      | X       | X       | X             | X      | X    | A        | A         | A         | A          |
| Isoamyl Alcohol                 | X       | X           | A    | X       | A         | C        | A        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Isoamyl Butyrate                | D       | X           | A    | X       | X         | X        | X        | D      | X       | X       | X             | X      | X    | A        | A         | A         | A          |
| Isoamyl Chloride                | D       | X           | A    | X       | D         | X        | D        | A      | X       | X       | X             | X      | X    | D        | X         | X         | X          |
| Iso Butane                      | X       | X           | A    | X       | D         | A        | D        | A/21   | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Iso Butyl Acetate               | D       | X           | A    | X       | D         | X        | C/21     | D      | X       | X       | X             | X      | X    | A        | A         | A         | A          |
| Isobutyl Alcohol                | B       | A           | A    | X       | A/27      | D        | A/71     | A/24   | A       | X       | A/21          | A      | A    | B        | C         | A         | A          |
| Isobutyl Amine                  | D       | X           | A    | X       | X         | X        | X        | D      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Isobutyl Chloride               | D       | X           | A    | X       | X         | X        | X        | B      | X       | X       | X             | X      | X    | D        | B         | B         | A          |
| Isobutyric Acid                 | D       | X           | A    | X       | B         | X        | A        | X      | X       | X       | X             | X      | X    | A        | X         | X         | X          |
| Iso-Butyl N-Butane              | D       | X           | A    | D       | X         | D        | X        | B      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Isocyanates                     | C       | X           | A    | B       | X         | B        | X        | B      | X       | X       | A             | A      | X    | X        | A         | A         | A          |
| Isododecane                     | A       | X           | A    | X       | B/21      | B/21     | D        | A/21   | X       | X       | X             | X      | X    | B        | B         | B         | B          |
| Isooctane                       | C       | C           | A    | A/158   | B         | A        | A/21     | A      | A       | X       | A/49          | X      | A/21 | A        | A/21      | A/21      | A          |
| Isopentane                      | A       | X           | A    | X       | D         | B        | D        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Isophorone (Ketone)             | D       | B           | A    | X       | D         | D        | A        | D      | X       | X       | X             | X      | X    | A        | A         | A         | A          |
| Isopropanol (Isopropyl Alcohol) | A       | B           | A    | A/21    | B/49      | B        | A/71     | A/77   | X       | A       | A             | A      | A    | A        | A         | A         | A          |
| Isopropyl Acetate               | D       | B           | A    | C       | D         | D        | B        | D      | C       | X       | A             | A      | X    | B        | A         | A         | B          |
| Isopropyl Alcohol (Isopropanol) | A       | B           | A    | A       | B         | D        | A        | A      | A       | A       | A             | A      | A    | A        | A         | A         | A          |
| Isopropyl Amine                 | D       | X           | A    | X       | X         | X        | X        | D      | X       | X       | X             | X      | X    | X        | A         | A         | X          |
| Isopropyl Benzene (Cumene)      | D       | X           | A    | X       | D         | D        | D        | A      | D       | X       | X             | X      | X    | X        | X         | X         | X          |

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|----------------------------------|---------|-------------|------|---------|-----------|----------|----------|--------|---------|---------|---------------|--------|------|----------|-----------|-----------|------------|
| Isopropyl Chloride               | D       | C           | A    | X       | D         | D        | D        | A      | X       | X       | D             | A      | X    | D        | A         | A         | X          |
| Isopropyl Ether                  | B       | C           | A    | X       | D         | B        | D        | D      | A       | X       | B/21          | A      | X    | A        | X         | A         | A          |
| JP-1                             | C       | D           | A    | X       | D         | C        | D        | A      | A       | X       | D             | A      | A    | A        | A         | A         | A          |
| JP-2                             | C       | C           | A    | X       | D         | C        | D        | A      | A       | X       | D             | A      | A    | A        | A         | A         | A          |
| JP-3 (Mil-J-5624)                | C       | C           | A    | X       | D         | C        | D        | A      | A       | X       | A/21          | A      | A    | A        | A         | A         | A          |
| JP-4 (Mil-J-5624)                | A       | D           | A    | A       | D         | C        | D        | A      | A       | X       | A/21          | A      | A    | A        | A         | A         | A          |
| JP-5 (Mil-J-5624)                | C       | C           | A    | X       | D         | B        | D        | A      | A       | X       | A/21          | A      | A    | A        | A         | A         | A          |
| JP-6 (Mil-J-25656)               | C       | C           | A    | X       | D         | C        | D        | A      | A       | X       | D             | A      | A    | A        | A         | A         | A          |
| JP-X(Mil-F-25604)                | A       | C           | A    | X       | B         | X        | D        | D      | A       | X       | D             | A      | A    | A        | A         | A         | A          |
| Kel F Liquids                    | X       | X           | A    | X       | X         | X        | A        | B      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Kerosene                         | A       | C           | A    | A       | X         | B        | X        | A      | C       | A       | B/22          | A      | A    | A        | A         | A         | B          |
| Ketones                          | D       | C           | A    | D       | D         | D        | A        | D      | C       | A       | D             | A      | A/21 | B        | X         | A         | A          |
| Keystone #87HX-Grease            | X       | X           | A    | X       | D         | A        | D        | A      | A       | X       | X             | X      | X    | X        | X         | X         | X          |
| Lactam-Amino Acids               | X       | X           | A    | X       | B         | X        | B        | D      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Lacquer Solvents                 | D       | C           | A    | B       | D         | D        | D        | D      | A       | B       | C             | A      | D    | A        | B         | A         | X          |
| Lacquers                         | D       | C           | A    | D       | D         | D        | D        | D      | A       | X       | C             | A      | D    | A        | C         | A         | A          |
| Lactic Acid- 5%Solution          | B       | A           | A    | D       | A         | B        | A        | A      | A       | X       | A             | A      | A/21 | C        | D         | A         | B          |
| Lactol                           | X       | X           | A    | X       | D         | X        | X        | A      | X       | X       | D             | A      | X    | A        | A         | A         | A          |
| Lard Oil (Hot)                   | X       | B           | A    | B       | A         | C        | B        | A      | A       | A       | B             | AA     | A    | A        | A         | A         | A          |
| Latex                            | A       | A           | A    | X       | A         | D        | A        | A      | X       | X       | A             | A      | X    | A        | X         | A         | X          |
| Lauryl Alcohol (N-Dodecanol)     | X       | X           | A    | X       | X         | D        | X        | B      | A       | X       | X             | X      | X    | A        | A         | A         | A          |
| Lavender Oil                     | B       | B           | A    | X       | D         | X        | D        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Lead Acetate                     | B       | A           | A    | X       | B         | D        | A        | A      | A       | A       | A             | A      | A    | D        | A         | B         | B          |
| Lead Chloride                    | X       | X           | A    | X       | B         | X        | A        | A      | X       | X       | A             | X      | A    | D        | X         | B         | B          |
| Lead Nitrate                     | A       | X           | A    | X       | A         | X        | A        | A      | A       | X       | A             | X      | A    | D        | B         | B         | B          |
| Lead Sulfamate                   | A       | A           | A    | X       | A         | X        | A        | A      | X       | X       | A             | A      | A    | C        | X         | X         | X          |
| Lehigh X1169                     | X       | X           | A    | X       | B         | A        | D        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Lehigh X1170                     | X       | X           | A    | X       | B         | A        | D        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Lemon Oil                        | X       | C           | A    | X       | C         | X        | C        | A      | X       | X       | X             | X      | X    | A        | X         | A         | X          |
| Light Grease                     | X       | X           | A    | X       | D         | A        | D        | A      | X       | X       | X             | A      | X    | X        | X         | X         | X          |
| Ligroin (Petro Ether or Benzene) | B       | B           | A    | X       | B         | C        | D        | A      | X       | X       | B/79          | B      | A    | X        | A         | A         | X          |
| Lignin Liquor                    | X       | X           | A    | X       | A         | D        | D        | A      | X       | X       | X             | X      | X    | X        | X         | A         | X          |
| Lime                             | A       | A           | A    | A       | A         | B        | A        | A      | X       | X       | B             | X      | A    | C        | A         | A         | X          |
| Lime Bleach                      | B       | A           | A    | X       | B         | X        | A        | A      | X       | X       | B             | X      | X    | D        | X         | A         | X          |
| Lime Slurries                    | A       | A           | A    | X       | A         | B        | C        | D      | X       | X       | X             | X      | X    | B        | X         | B         | X          |
| Lime Sulfur                      | A       | B           | A    | X       | A         | A        | A        | A      | A       | X       | A             | X      | A    | D        | X         | A         | X          |
| "Lindol, Hydraulic Fluid"        | D       | A           | A    | X       | D         | D        | A        | B      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Limone                           | D       | X           | A    | X       | D         | X        | D        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Linoleic Acid                    | B       | B           | A    | X       | D         | X        | D        | B      | A       | X       | A             | X      | A    | A        | X         | A         | A          |
| Linseed Oil                      | A       | B           | A    | B       | A         | B        | C        | A      | X       | X       | A             | A      | A    | A        | A         | A         | A          |
| Liquid Oxygen                    | D       | X           | A    | X       | D         | D        | D        | D      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Liquid Petroleum Gas (LPG)       | D       | C           | A    | B       | C         | C        | D        | A      | X       | X       | D             | A      | X    | X        | X         | X         | A          |
| Liquimoly                        | A       | X           | A    | X       | B         | B/21     | D        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Lithium Bromide                  | A       | X           | A    | X       | D         | D        | A        | A      | X       | X       | X             | X      | A    | X        | A         | X         | X          |
| Lithium Chloride                 | A       | X           | A    | X       | A         | D        | A        | A      | D       | X       | A/52          | A      | X    | D        | B         | A         | A          |

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|-----------------------------------|---------|-------------|------|---------|-----------|----------|----------|--------|---------|---------|---------------|--------|------|----------|-----------|-----------|------------|
| Lithium Hydroxide                 | D       | X           | A    | X       | D         | D        | A        | C      | D       | X       | A/21          | X      | X    | D        | B         | B         | B          |
| Lubricating Oil Di-Ester          | A       | D           | A    | D       | C         | D        | D        | A      | A       | X       | X             | X      | X    | X        | X         | X         | X          |
| Petroleum Base                    | B       | D           | A    | A       | B/66      | B/21     | D        | A      | B       | X       | C             | A      | A    | A        | A         | A         | A          |
| SAE 10,20, 30, 40, 50             | A       | D           | A    | A       | D         | A        | D        | A      | A       | X       | C             | A      | A    | A        | A         | A         | A          |
| Lye Solutions                     | B       | A           | A    | C       | A         | B        | A        | B      | A       | X       | A             | D      | A/66 | X        | X         | A         | X          |
| Lysol                             | B       | X           | A    | X       | B         | X        | X        | X      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Magnesium Bisulfite               | C       | X           | A    | X       | B         | X        | X        | X      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Magnesium Carbonate               | A       | A           | A    | X       | A         | B        | B        | A      | A       | X       | A             | A      | A    | D        | B         | A         | B          |
| Magnesium Chloride                | A       | A           | A    | B       | A         | X        | A        | A      | A       | A       | A             | B      | A    | D        | D         | D         | A          |
| Mag. Hydroxide (Milk of Magnesia) | A       | A           | A    | B       | A         | A        | A        | A      | A       | A       | A             | A      | A    | D        | B         | A         | A          |
| Magnesium Nitrate                 | A       | A           | A    | X       | A         | B        | A        | A      | A       | X       | A             | A      | A    | D        | D         | A         | A          |
| Magnesium Oxide                   | A       | A           | A    | X       | A         | X        | A        | A      | X       | X       | X             | A      | X    | B        | A         | A         | A          |
| Magnesium Salts                   | A       | A           | A    | X       | A         | A        | A        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Magnesium Sulfate                 | B       | A           | A    | B       | A         | D        | A        | A      | B       | A       | B             | A      | A    | D        | C         | A         | B          |
| Magnesium Sulfite                 | B       | A           | A    | X       | A         | X        | A        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Malathion                         | X       | X           | A    | D       | X         | D        | D        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Maelic Acid                       | A       | A           | A    | X       | D         | D        | A        | A      | A       | A       | B             | A      | A    | B        | A         | A         | B          |
| Maelic Anhydride                  | D       | A           | A    | X       | D         | X        | D        | A      | X       | X       | X             | A      | X    | A        | B         | A         | A          |
| Malic Acid                        | B       | A           | A    | X       | B         | X        | D        | A      | X       | A       | B             | A      | A    | B        | D         | A         | B          |
| Manganese Chloride                | A       | X           | A    | X       | B         | B        | C        | A      | A       | X       | A             | X      | X    | X        | D         | X         | B          |
| Malt Beverages                    | B       | A           | A    | X       | A         | B        | A        | A      | A       | X       | X             | X      | X    | X        | X         | X         | X          |
| Maple Sugar Liquors (Sucrose)     | A       | A           | A    | X       | A         | D        | A        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Mash                              | A       | A           | X    | X       | A         | A        | X        | X      | X       | X       | X             | A      | X    | X        | X         | A         | X          |
| Mayonnaise                        | A       | A           | A    | X       | A         | D        | D        | A      | A       | A       | A             | A      | A    | D        | D         | A         | A          |
| MCS 312                           | D       | X           | A    | X       | D         | X        | D        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| MCS 352                           | D       | X           | A    | X       | D         | D        | A        | D      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| MCS 463                           | D       | X           | A    | X       | D         | D        | A        | D      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Melamine Resins                   | C       | B           | A    | X       | D         | D        | A        | A      | X       | X       | X             | A      | X    | X        | X         | D         | A          |
| Mercaptan                         | D       | X           | A    | X       | D         | D        | A        | D      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Mercuric Chloride                 | A       | A           | A    | B       | A         | A        | A        | A      | A       | X       | A             | B      | A    | D        | D         | D         | B          |
| Mercuric Cyanide                  | A       | A           | A    | D       | B         | X        | A        | A      | A       | X       | A             | X      | A    | D        | C         | A         | A          |
| Mercurous Nitrate                 | B       | X           | A    | X       | B         | X        | A        | A      | A       | X       | A             | X      | A    | D        | B         | B         | B          |
| Mercury                           | A       | A           | A    | A       | A         | A        | A        | A      | A       | A       | A             | A      | A    | C        | A         | A         | A          |
| Mesityl Oxide                     | D       | C           | A    | X       | D         | D        | B        | D      | X       | X       | X             | X      | X    | A        | A         | A         | A          |
| Methane                           | B       | C           | A    | B       | B         | C        | D        | A      | X       | X       | B             | A      | A    | A        | X         | A         | A          |
| Methanol                          | A       | A           | A    | A       | A         | D        | A        | D      | A       | X       | A/49          | A      | A    | B        | X         | A         | A          |
| Methyl Acetate                    | D       | B           | A    | C       | D         | D        | B        | D      | X       | X       | C             | A      | B    | A        | A         | A         | A          |
| Methyl Acetoacetate               | D       | X           | A    | X       | D         | D        | B        | D      | X       | X       | X             | X      | X    | X        | A         | A         | A          |
| Methyl Acetone                    | D       | B           | A    | X       | D         | X        | A        | D      | X       | X       | D             | A      | D    | A        | A         | A         | A          |
| Methyl Acrylate                   | D       | D           | A    | X       | D         | D        | B        | D      | X       | X       | X             | A      | B    | X        | A         | A         | X          |
| Methyl Acrylic Acid               | X       | A           | A    | X       | C         | D        | B        | C      | X       | X       | X             | A      | X    | X        | X         | X         | X          |
| Methyl Alcohol                    | A       | A           | A    | A       | C         | D        | A        | C      | A       | A       | A             | A      | A    | B        | A         | B         | A          |
| Methyl Amine                      | B       | X           | A    | X       | C         | X        | A        | C      | X       | X       | X             | A      | C    | B        | A         | A         | B          |
| Methyl Amyl Alcohol               | B       | X           | A    | X       | D         | X        | X        | D      | X       | X       | X             | X      | X    | A        | A         | A         | A          |
| Methyl Aniline                    | D       | X           | A    | X       | B         | D        | D        | B      | X       | X       | X             | X      | X    | X        | X         | X         | X          |

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|--|---------|-------------|------|---------|-----------|----------|----------|--------|---------|---------|---------------|--------|------|-----------|-----------|-----------|------------|
| Methyl Benzoate                                      | D       | X           | A    | X       | A         | D        | D        | A      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Methyl Bromide                                       | B       | D           | A    | X       | A         | D        | D        | A      | C       | X       | D             | A      | A    | D         | A         | A         | B          |
| Methyl Butyl Ketone                                  | D       | C           | A    | X       | D         | D        | A        | D      | X       | X       | D             | A      | D    | A         | X         | A         | X          |
| Methyl Butyrate                                      | D       | X           | A    | X       | D         | X        | D        | X      | X       | X       | X             | X      | X    | A         | A         | A         | A          |
| Methyl Carbonate                                     | D       | X           | A    | X       | D         | D        | D        | A      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Methyl Cellosolve                                    | C       | B           | A    | X       | B         | D        | B        | D      | X       | X       | B             | A      | A    | A         | C         | X         | X          |
| Methyl Cellulose                                     | B       | X           | A    | X       | B         | B/21     | B        | D      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Methyl Chloride                                      | D       | D           | A    | D       | D         | D        | D        | B      | C       | X       | D             | A      | A    | D         | D         | A         | B          |
| Methyl Chloroformate                                 | D       | X           | A    | X       | D         | D        | D        | A      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Methyl Cyanide                                       | C       | X           | A    | X       | A         | X        | A        | D      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Methyl Cyclopentane                                  | D       | C           | A    | X       | D         | D        | X        | A      | A       | X       | X             | A      | X    | X         | X         | X         | X          |
| Methyl D-Bromide                                     | D       | X           | A    | X       | D         | D        | X        | A      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Methyl Dichloride                                    | D       | D           | A    | X       | D         | X        | D        | A      | X       | X       | D             | A      | D    | D         | X         | X         | X          |
| Methyl Ether   | X       | X           | A    | X       | C         | X        | A        | A      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Methyl Ethyl Ketone (MEK)                            | B       | B           | A    | B       | D         | D        | A        | D      | D       | X       | C/52          | B      | D    | A         | A         | A         | A          |
| Methyl Formate                                       | D       | B           | A    | X       | B         | D        | B        | D      | X       | X       | X             | A      | X    | A         | B         | B         | X          |
| Methyl Hexane  | X       | X           | A    | X       | B         | X        | D        | A      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Methyl Iodide  | D       | X           | A    | X       | D         | X        | A        | X      | X       | X       | X             | X      | X    | D         | A         | A         | A          |
| Methyl Isopropyl Ketone                              | D       | C           | A    | X       | D         | D        | C        | D      | C       | X       | C             | A      | X    | A         | C         | A         | X          |
| Methyl Methacrylate                                  | D       | B           | A    | X       | D         | D        | D        | D      | X       | X       | A             | A      | B    | B         | C         | A         | X          |
| Methyl Oleate  | D       | C           | A    | X       | D         | X        | B        | A      | X       | X       | X             | A      | X    | X         | X         | X         | X          |
| Methyl Salicylate                                    | D       | B           | A    | X       | D         | X        | B        | B      | X       | X       | B             | A      | B    | A         | A         | X         | X          |
| Methylamine  | X       | A           | A    | X       | X         | X        | A        | X      | X       | X       | X             | A      | C    | B         | A         | A         | B          |
| Methylene Bromide                                    | D       | X           | A    | X       | D         | X        | D        | C      | X       | X       | X             | X      | A    | D         | A         | A         | A          |
| Methylene Chloride                                   | C       | D           | A    | D       | D         | D        | C        | B      | D       | X       | D             | A      | B    | D         | B         | A         | A          |
| Methylene Dichloride                                 | D       | X           | A    | X       | D         | D        | D        | B      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Milk   | A       | A           | A    | B       | A         | D        | A        | A      | A       | A       | A             | A      | A    | A         | D         | A         | A          |
| Mine Water   | A       | B           | A    | X       | C         | D        | A        | A      | A       | X       | A             | A      | A    | A         | A         | A         | A          |
| Mineral Oil  | A       | D           | A    | A       | A         | A        | D        | A      | C       | A       | B             | A      | A    | A         | A         | A         | A          |
| MLO-7277 Hydr.                                       | X       | X           | A    | X       | D         | D        | D        | A      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| MLO-75557  | X       | X           | A    | X       | D         | D        | D        | A      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| MLO-8200 Hydr.                                       | X       | X           | A    | X       | A         | A        | D        | A      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| MLO-8515   | X       | X           | A    | X       | B         | D        | D        | A      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Molasses   | A       | A           | A    | B       | A         | B        | A        | A      | A       | A       | A             | B      | A    | A         | A         | A         | X          |
| Monochloroacetic Acid                                | D       | D           | A    | D       | A         | D        | C        | B      | D       | X       | A             | B      | A    | D         | D         | D         | B          |
| Monochlorobenzene                                    | D       | D           | A    | C       | D         | D        | D        | A      | B       | X       | D             | A      | A/66 | D         | A         | A         | X          |
| Monochlorodifluoro Methane                           | D       | D           | A    | D       | A         | D        | A        | D      | X       | X       | A             | X      | A    | A         | A         | A         | X          |
| Monoethanolamine                                     | D       | A           | A    | D       | B         | D        | B        | D      | X       | X       | D             | D      | D    | B         | A         | A         | X          |
| Monomethylaniline                                    | D       | B           | A    | D       | D         | D        | D        | B      | A       | X       | X             | X      | X    | X         | X         | X         | X          |
| Monomethylether                                      | A       | C           | A    | D       | B         | X        | A        | A      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Monomethyl Hydrazine                                 | B       | X           | A    | D       | B         | X        | A        | X      | A       | X       | X             | X      | X    | X         | X         | X         | X          |
| Mononitrotoluene & Dicitrotoluene<br>(40/60 Mixture) | A       | X           | A    | D       | D         | D        | D        | C      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Muriatic Acid (10-20% HCL)                           | B       | A           | A    | D       | D         | B        | A        | A      | A       | X       | A             | D      | A    | D         | D         | D         | A          |
| Mustard  | B       | A           | A    | B       | A         | B        | A        | A      | A       | X       | A             | A      | X    | B         | X         | A         | A          |

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|------------------------------|---------|-------------|------|---------|-----------|----------|----------|--------|---------|---------|---------------|--------|------|----------|-----------|-----------|------------|
| Napalm                       | B       | X           | X    | D       | X         | B        | D        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Naptha                       | A       | C           | A    | A       | D         | C        | D        | A      | C       | A       | C             | A      | A    | A        | B         | A         | A          |
| Naptha-Coal Tar (Benzol)     | D       | C           | A    | D       | D         | B        | D        | A      | X       | X       | C             | A      | A    | A        | A         | A         | A          |
| Napthalene (Tar Camphor)     | D       | C           | A    | B       | D         | B        | D        | A      | B       | X       | B             | A      | A    | B        | A         | A         | A          |
| Napthenic Acid               | B       | B           | A    | D       | D         | X        | D        | A      | X       | X       | X             | A      | X    | B        | B         | A         | B          |
| Natural Gas                  | A       | C           | A    | B       | A         | C        | D        | A      | X       | X       | A             | A      | X    | A        | A         | A         | X          |
| Neatsfoot Oil                | A       | B           | A    | D       | D         | A        | B        | A      | X       | X       | X             | B      | X    | A        | A         | A         | X          |
| Neohexane                    | A       | X           | A    | D       | X         | X        | X        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Neosol                       | A       | X           | A    | D       | A         | X        | X        | C      | X       | X       | X             | X      | X    | B        | B         | A         | A          |
| Neville Acid                 | D       | A           | A    | D       | D         | X        | B        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Nickel Acetate               | B       | A           | A    | X       | B         | D        | A        | D      | X       | X       | A             | X      | A    | B        | X         | A         | X          |
| Nickel Ammonium Sulfate      | C       | A           | A    | X       | A         | X        | X        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Nickel Chloride              | A       | A           | A    | D       | B         | A        | A        | A      | A       | A       | A             | B      | A    | D        | D         | B         | A          |
| Nickel Nitrate               | A       | A           | A    | X       | A         | A        | A        | A      | A       | X       | A             | D      | A    | D        | X         | A         | B          |
| Nickel Salts                 | A       | A           | A    | X       | B         | A        | A        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Nickel Sulfate               | A       | A           | A    | D       | A         | A        | A        | A      | A       | A       | A             | A      | A    | D        | D         | A         | B          |
| Nicotine                     | A       | X           | A    | B       | C         | A        | X        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Nicotinic Acid               | A       | X           | A    | X       | A         | X        | A        | X      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Niter Cake                   | A       | A           | A    | X       | A         | A        | A        | A      | A       | X       | X             | X      | X    | X        | X         | X         | X          |
| Nitrana (Ammonia Fertilizer) | B       | X           | A    | X       | B         | X        | X        | C      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Nitric Acid                  |         |             |      |         |           |          |          |        |         |         |               |        |      |          |           |           |            |
| Concentrated                 | D       | C           | A    | D       | D         | D        | D        | A      | D       | X       | D             | C      | A/52 | D        | D         | A         | B          |
| Red Fuming (RFNA)            | X       | D           | A    | D       | D         | D        | D        | B      | D       | X       | D             | C      | D    | D        | D         | A         | B/21       |
| 5% To 10% Solution           | A       | A           | A    | B       | D         | C        | B        | A      | A       | X       | A/49          | C      | A/49 | D        | D         | A         | A          |
| 20% Solution                 | B       | B           | A    | D       | D         | C        | B        | A      | A       | X       | B/21          | C      | A    | D        | D         | A         | B          |
| 50% Solution (Boiling)       | C       | C           | A    | D       | D         | C        | D        | A      | D       | X       | B/21          | C      | A/52 | D        | D         | A         | A          |
| 65% Solution (Boiling)       | D       | C           | A    | D       | D         | C        | D        | A      | D       | X       | D             | D      | A    | D        | D         | A         | D          |
| Nitrobenzene                 | D       | B           | A    | D       | D         | D        | C        | A      | D       | X       | B/21          | B      | A/21 | C        | C         | B         | B          |
| Nitroethane                  | D       | A           | A    | X       | C         | D        | B        | D      | A       | X       | C             | B      | X    | A        | A         | A         | A          |
| Nitrogen                     | A       | A           | A    | B       | A         | A        | A        | A      | X       | X       | A             | A      | A    | A        | A         | A         | A          |
| Nitrogen Tetroxide           | D       | D           | A    | B       | D         | D        | D        | D      | A       | X       | D             | X      | C    | D        | D         | A         | A          |
| Nitroglycerine               | X       | A           | A    | D       | A         | A        | A        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Nitromethane                 | D       | A           | A    | D       | C         | D        | B        | D      | A       | X       | C             | X      | A/49 | A        | A         | A         | A          |
| Nitropropane                 | X       | B           | A    | X       | D         | D        | B        | D      | A       | X       | X             | X      | X    | A        | A         | A         | A          |
| Nitrous Acid                 | D       | X           | A    | X       | X         | X        | B        | A      | X       | X       | D             | X      | A    | D        | D         | B         | A          |
| Nitrous Oxide                | A       | X           | A    | X       | B         | B        | A        | A      | X       | X       | A             | X      | D    | B        | B         | D         | B          |
| Octachloro Toluene           | D       | X           | A    | X       | D         | D        | D        | A      | X       | X       | D             | X      | X    | D        | X         | X         | X          |
| Octadecane                   | X       | B           | A    | X       | B         | A        | D        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| N-Octane                     | D       | B           | A    | X       | D         | D        | D        | A      | X       | X       | D             | X      | A    | X        | X         | X         | X          |
| Octyl Acetate                | D       | X           | A    | X       | X         | X        | X        | D      | X       | X       | X             | X      | X    | A        | X         | A         | X          |
| Octyl Alcohol                | B       | X           | A    | X       | B         | D        | B        | B      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| "Oils, Crude(Asphalt Base)"  | B       | D           | A    | B       | C         | A        | D        | A      | B       | X       | B             | A      | A    | A        | B         | A         | A          |
| Oleic Acid (Red Oil)         | D       | B           | A    | A       | C         | B/21     | C        | A      | A       | A       | A             | A      | A    | A        | B         | A         | A          |
| Olein (Triolein)             | X       | D           | A    | X       | C         | X        | X        | X      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Oleum (Fuming Sulfuric Acid) | D       | D           | A    | D       | D         | D        | D        | B      | D       | X       | D             | D      | D    | D        | D         | A         | D          |



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|---|---------|-------------|------|---------|-----------|----------|----------|--------|---------|---------|---------------|--------|-------|-----------|-----------|-----------|------------|
| Oleum Spirits                           | D       | D           | A    | B       | D         | C        | D        | A      | A       | X       | D             | X      | D     | D         | D         | B         | X          |
| Olive Oil                               | D       | B           | A    | X       | B         | A        | B        | A      | A       | X       | A             | A      | B     | A         | A         | B         | A          |
| Oronite 8200                            | X       | X           | A    | B       | A         | A        | D        | A      | X       | X       | X             | X      | X     | X         | X         | X         | X          |
| Oronite 9515                            | X       | X           | A    | X       | X         | X        | X        | X      | X       | X       | X             | X      | X     | X         | X         | X         | X          |
| Orthochloro Ethyl Benzene               | X       | X           | A    | X       | D         | D        | D        | A      | X       | X       | X             | X      | X     | X         | X         | X         | X          |
| Ortho-Dichlorobenzene                   | X       | D           | A    | D       | D         | D        | D        | A      | X       | X       | X             | X      | X     | X         | X         | X         | X          |
| OS 45 Type 111 (OS45)                   | X       | X           | A    | C       | A         | D        | D        | B      | X       | X       | X             | X      | X     | X         | X         | X         | X          |
| OS 45 Type IV (OS45-1)                  | X       | X           | A    | X       | A         | D        | D        | B      | X       | X       | X             | X      | X     | X         | X         | X         | X          |
| OS 70                                   | X       | X           | A    | X       | A         | D        | D        | A      | X       | X       | X             | X      | X     | X         | X         | X         | X          |
| Oxalic Acid - 5% (Hot and Cold)         | C       | A           | A    | D       | B         | A        | A        | A      | A       | X       | A             | D      | A/49  | B         | D         | B         | B          |
| Ozone                                   | X       | A           | A    | C       | C         | A        | A        | A      | B       | X       | D             | D      | A     | B         | X         | X         | X          |
| "Paint Thinner, Duco"                   | D       | C           | A    | X       | D         | D        | D        | B      | X       | A       | D             | A      | X     | A         | A         | A         | X          |
| Palmitic Acid                           | A       | B           | A    | A       | B         | A        | B        | A      | X       | A       | A             | A      | A     | C         | C         | A         | B          |
| Palm Oil                                | X       | B           | A    | X       | D         | A        | D        | A      | A       | X       | X             | A      | A     | A         | A         | A         | X          |
| Para-Dichlorobenzene                    | X       | X           | A    | X       | D         | D        | D        | A      | X       | X       | X             | X      | X     | X         | X         | X         | X          |
| Paraffin                                | A       | A           | A    | X       | B         | A        | D        | A      | A       | A       | A             | A      | A     | A         | X         | A         | B          |
| Paraformaldehyde                        | X       | X           | A    | X       | B         | X        | A        | C      | X       | X       | X             | X      | X     | A         | A         | A         | A          |
| Paraldehyde                             | X       | X           | A    | X       | D         | X        | A        | D      | X       | X       | X             | X      | X     | A         | A         | A         | A          |
| Peanut Oil                              | A       | B           | A    | X       | A         | B/21     | C/21     | A      | A       | X       | A             | X      | A     | X         | A         | A         | A          |
| Pentachloroethane (Pentalin)            | D       | X           | A    | X       | D         | X        | X        | A      | X       | X       | D             | A      | A     | D         | A         | A         | A          |
| Pentachlorophenol (PCP)                 | X       | X           | A    | X       | D         | D        | D        | A      | X       | X       | X             | X      | X     | A         | A         | A         | A          |
| Pentane                                 | X       | X           | A    | X       | B         | D        | D        | A      | C       | X       | X             | A      | A     | A         | B         | B         | B          |
| Peppermint Oil                          | X       | C           | X    | X       | D         | X        | X        | A      | C       | X       | X             | X      | X     | X         | X         | A         | X          |
| Perchloric Acid                         | D       | D           | A    | D       | B         | D        | B        | A      | C       | X       | X             | C      | A/49  | D         | D         | B         | X          |
| Perchloroethylene (Tetrachloroethylene) | D       | D           | A    | D       | D         | D        | D        | B      | B       | X       | D             | A      | A     | D         | B         | A         | B          |
| Permachlor (Degreasing Fluid)           | X       | X           | A    | X       | X         | X        | D        | C/21   | X       | X       | X             | X      | X     | X         | X         | X         | X          |
| Petrolatum                              | A       | X           | A    | X       | B         | D        | D        | A      | X       | X       | A             | A      | A     | B         | X         | A         | A          |
| Petroleum Ether                         | A       | X           | A    | X       | D         | B        | D        | A      | A       | X       | A             | A      | B     | B         | B         | A         | D          |
| Petroleum Oils (Refined)                | B       | C           | A    | A       | B         | B        | D        | A      | A       | X       | B             | A      | A     | X         | X         | X         | X          |
| Petroleum Oils (Sour)                   | C       | C           | A    | B       | B         | B        | D        | A      | A       | X       | B             | A      | A     | B         | B         | A         | A          |
| "Petroleum Oil, Crude"                  | C       | C           | A    | A       | B         | A        | D        | A      | A       | X       | B             | A      | A     | X         | X         | X         | X          |
| Phenol                                  | D       | A           | A    | D       | D         | D        | X        | A      | C       | X       | C             | A      | A/21  | B         | D         | A         | A          |
| Phenol Sulfonic Acid                    | X       | X           | Q    | X       | X         | X        | X        | D      | X       | X       | X             | X      | AB/49 | B         | B         | B         | A          |
| Phenyl Acetate                          | X       | X           | A    | X       | D         | D        | B/21     | D      | X       | X       | X             | X      | X     | X         | X         | X         | X          |
| Phenylbenzene                           | X       | C           | A    | X       | D         | D        | D        | A      | X       | X       | X             | X      | X     | X         | X         | X         | X          |
| Phenyl Hydrazine                        | X       | B           | A    | X       | D         | X        | D        | A      | X       | X       | X             | X      | D     | A         | D         | X         | X          |
| Phorone(Diisopropylidene Acetone)       | X       | B           | A    | X       | D         | D        | B        | D      | A       | X       | X             | X      | X     | X         | X         | X         | X          |
| Phosphate Esters                        | X       | X           | A    | X       | D         | D        | A        | D      | X       | X       | X             | X      | X     | X         | X         | X         | X          |
| Phosphoric Acid 20%<br>40-100% Solution | X       | A           | A    | X       | A         | C        | A        | A      | A       | X       | A             | D      | A     | D         | D         | A         | A          |
| 40-100% Solution                        | X       | C           | A    | D       | A/60      | D        | A/54     | A      | B       | X       | A             | D      | A     | D         | D         | B         | A          |
| Phosphorous Oxychloride                 | X       | X           | A    | X       | D         | X        | X        | X      | X       | X       | X             | X      | X     | B         | B         | B         | B          |
| Phosphorous Trichloride Acid            | D       | B           | A    | X       | D         | X        | A        | A      | A       | X       | D             | D      | A     | D         | B         | A         | X          |
| Photographic Developer                  | B       | A           | A    | D       | A         | B        | B        | A      | A       | X       | A             | A      | A     | C         | D         | A         | A          |
| Phthalic Acid                           | D       | X           | A    | X       | C         | X        | A        | A      | A       | X       | A             | X      | A     | B         | A         | B         | B          |
| Phthalic Anhydride                      | X       | X           | A    | X       | A         | X        | A        | A      | X       | X       | X             | X      | X     | X         | X         | X         | X          |

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|--------------------------------------|---------|-------------|------|---------|-----------|----------|----------|--------|---------|---------|---------------|--------|------|----------|-----------|-----------|------------|
| Pickling Solution                    | D       | A           | A    | D       | D         | C        | C/21     | B/21   | A       | X       | X             | D      | X    | X        | X         | X         | A          |
| Picric Acid                          | B       | B           | A    | D       | C         | C        | C        | A      | A       | A       | B/21          | D      | A/21 | C        | D         | D         | D          |
| Pinene                               | B       | C           | A    | D       | D         | D        | D        | A      | A       | X       | X             | X      | X    | X        | X         | X         | X          |
| Pine Oil                             | B       | C           | A    | D       | D         | D        | D        | A      | C       | A       | X             | X      | X    | A        | B         | A         | X          |
| Piperidine                           | X       | B           | A    | D       | D         | D        | D        | D      | B       | X       | X             | X      | X    | X        | X         | X         | X          |
| Pitch                                | A       | X           | A    | D       | D         | D        | D        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Plating Solutions                    |         |             |      |         |           |          |          |        |         |         |               |        |      |          |           |           |            |
| Antimony                             | B       | A           | A    | X       | A         | X        | X        | A      | A       | X       | A             | A      | A    | D        | A         | A         | A          |
| Arsenic                              | B       | A           | A    | X       | A         | X        | X        | A      | A       | X       | A             | A      | X    | C        | A         | A         | A          |
| Brass                                | B       | A           | A    | X       | A         | X        | A        | A      | A       | X       | A             | A      | A    | C        | A         | A         | A          |
| Bronze                               | B       | A           | A    | X       | A         | X        | A        | A      | A       | X       | A             | B      | X    | C        | A         | A         | A          |
| Cadmium                              | B       | A           | A    | X       | A         | X        | A        | A      | A       | X       | A             | C      | A    | C        | A/21      | A/60      | A/32       |
| Chrome                               | D       | A           | A    | X       | D         | X        | A        | A      | A       | X       | A             | D      | A    | C        | C         | A         | B          |
| Copper                               | B       | A           | A    | X       | A         | D        | A        | X      | A       | X       | A             | X      | A    | C        | A/21      | A/66      | A/49       |
| Gold                                 | B       | A           | A    | X       | A         | X        | A        | A      | A       | X       | A             | X      | A    | C        | X         | A/66      | A/21       |
| Indium                               | B       | A           | A    | X       | A         | X        | X        | A      | A       | X       | A             | X      | X    | C        | X         | A         | A          |
| Iron                                 | B       | A           | A    | X       | A         | X        | X        | A      | A       | X       | A             | X      | A    | C        | X         | A         | A          |
| Lead                                 | C       | A           | A    | X       | A         | X        | A        | A      | C       | X       | A             | A      | A    | C        | X         | X         | X          |
| Nickel                               | B       | A           | A    | X       | A         | X        | A        | A      | A       | X       | A             | X      | A    | C        | X         | A/21      | A/60       |
| Silver                               | B       | A           | A    | X       | A         | X        | A        | A      | A       | X       | A             | X      | A    | C        | X         | A         | A          |
| Tin                                  | B       | A           | A    | X       | A         | X        | A        | A      | A       | X       | A             | X      | A    | C        | X         | A         | A          |
| Zinc                                 | B       | A           | A    | X       | A         | X        | A        | A      | A       | X       | A             | X      | A    | C        | X         | A         | A          |
| Polyvinyl Acetate Emulsion           | B       | A           | A    | X       | B         | X        | A        | D      | X       | X       | B/21          | A      | A    | X        | B         | X         | X          |
| Potassium Acetate                    | B       | A           | A    | X       | B         | D        | A        | D      | A       | X       | A             | A      | A    | D        | A         | B         | B          |
| Potassium Bicarbonate                | A       | A           | A    | X       | A         | D        | A        | A      | A       | A       | A             | A      | A    | C        | A         | B         | B          |
| Potassium Bisulfite                  | A       | X           | A    | X       | A         | A        | A        | A      | X       | X       | A             | X      | X    | X        | X         | X         | X          |
| Potassium Bromide                    | A       | A           | A    | X       | A         | D        | A        | A      | A       | A       | A             | A      | A    | C        | D         | A         | A          |
| Potassium Carbonate (Potash)         | A       | A           | A    | D       | A         | D        | A        | A      | A       | X       | A             | A      | A    | C        | B         | A         | B          |
| Potassium Chlorate                   | A       | A           | A    | X       | A         | A        | A        | A      | A       | A       | A             | A      | A    | B        | C         | A         | B          |
| Potassium Chloride                   | A       | A           | A    | D       | A         | A        | A        | A      | A       | A       | A             | A      | A    | B        | B         | C         | B          |
| Potassium Chromate                   | A       | A           | A    | X       | A         | B        | A        | A      | A       | A       | A             | D      | A    | A        | A         | B         | A          |
| Potassium Cupro Cyanide              | X       | A           | A    | X       | A         | X        | B        | A      | X       | X       | A             | C      | A    | X        | X         | X         | X          |
| Potassium Cyanide                    | A       | A           | A    | B       | A         | A        | A        | A      | A       | A       | A             | C      | A    | D        | B         | A         | B          |
| Potassium Dichromate                 | A       | A           | A    | B       | A         | B        | A        | A      | A       | X       | A             | D      | A    | A        | B         | A         | B          |
| Potassium Ferricyanide               | X       | X           | A    | X       | A         | X        | A        | A      | A       | X       | A             | B      | A    | B        | C         | B         | B          |
| Pot. Hydroxide (Caustic Potash)(Lye) | A       | A           | A    | A       | B         | B        | A        | B      | A       | X       | A             | A      | A/66 | D        | C         | A         | B          |
| Potassium Hypochlorite               | B/21    | X           | B    | X       | B         | B        | A        | D      | X       | X       | D             | D      | A    | D        | D         | D         | B          |
| Potassium Iodide                     | B       | X           | A    | X       | A         | X        | A        | A      | B       | X       | A             | X      | A    | B        | X         | B         | B          |
| Potassium Nitrate                    | A       | A           | A    | X       | A         | A        | A        | A      | A       | A       | A             | B      | A    | A        | B         | B         | B          |
| Potassium Permanganate               | D       | A           | A    | D       | A         | B        | A        | A      | A       | X       | B             | C      | A    | B        | B         | B         | A          |
| Potassium Phosphate                  | X       | X           | A    | X       | A         | C        | A        | A      | X       | X       | X             | X      | X    | D        | D         | B         | B          |
| Potassium Salts                      | A       | X           | A    | X       | A         | A        | A        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Potassium Sulfate                    | A       | A           | A    | B       | A         | A        | A        | A      | A       | X       | A             | B      | A    | B        | B         | A         | A          |
| Potassium Sulfide                    | A       | X           | A    | X       | A         | A        | A        | A      | A       | X       | A             | X      | A    | D        | B         | B         | B          |
| Potassium Sulfite                    | A       | X           | A    | X       | A         | A        | A        | A      | A       | X       | A             | X      | A    | A        | D         | B         | X          |

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|----------------------------|---------|-------------|------|---------|-----------|----------|----------|--------|---------|---------|---------------|--------|------|-----------|-----------|-----------|------------|
| Potassium Triphosphate     | A       | X           | D(A) | X       | A         | B        | X        | A      | A       | X       | X             | X      | X    | X         | X         | X         | X          |
| PRL-High Temp. Hydr. Oil   | B/21    | X           | A    | X       | B         | B        | D        | A      | A       | X       | X             | X      | X    | X         | X         | X         | X          |
| Producer Gas               | X       | X           | A    | X       | B         | A        | D        | A      | D       | X       | X             | A      | X    | X         | X         | X         | X          |
| Propane (LPG)              | B       | C           | A    | B       | B         | B        | D        | A      | C       | X       | D             | A      | A    | A         | B         | A         | A          |
| Propane (Liquified)        | B       | X           | A    | B       | B         | B        | D        | A      | C       | X       | B/21          | A      | B/20 | A         | A         | A         | A          |
| Propane Propionitrile      | X       | X           | A    | X       | B         | D        | D        | A      | A       | X       | X             | X      | X    | X         | X         | X         | X          |
| Propionaldehyde (Propanol) | X       | X           | A    | X       | D         | D        | A        | D      | X       | X       | X             | X      | X    | A         | A         | A         | A          |
| Propionic Acid             | X       | A           | A    | X       | D         | D        | A        | D      | X       | X       | X             | X      | X    | A         | A         | A         | A          |
| Propyl Acetate             | D       | B           | A    | X       | D         | D        | B        | D      | X       | X       | C             | A      | A/21 | A         | X         | A         | A          |
| Propyl Alcohol             | B       | A           | A    | X       | A         | D        | A        | A      | A       | X       | A             | A      | A    | A         | A         | A         | A          |
| Propylene                  | X       | B           | A    | X       | D         | D        | D        | A      | A       | X       | A             | A      | A    | A         | A         | A         | A          |
| Propylene Dichloride       | X       | X           | A    | X       | D         | D        | D        | A      | D       | X       | X             | X      | X    | D         | A         | A         | B          |
| Propylene Glycol           | A       | A           | A    | X       | C         | B        | A        | A      | B       | X       | A             | D      | A    | A         | B         | A         | B          |
| Propylene Oxide            | D       | A           | A    | X       | D         | D        | B        | D      | A       | X       | A/21          | A      | D    | B         | B         | A         | X          |
| Propyl Nitrate             | X       | B           | A    | X       | D         | D        | B        | D      | X       | X       | C             | A      | D    | B         | B         | A         | X          |
| Pyranol, Transformer Oil   | X       | X           | A    | X       | D         | B        | D        | A      | C       | X       | X             | X      | X    | X         | X         | X         | X          |
| Pydraul                    | X       | X           | X    | X       | X         | X        | X        | X      | X       | X       | X             | X      | X    | X         | A         | A         | A          |
| Pyridine                   | X       | A           | A    | C       | D         | D        | B        | D      | D       | X       | C             | B      | D    | B         | A         | B         | A          |
| Pyrogalllic Acid           | X       | X           | A    | X       | A         | D        | B        | A      | C       | X       | X             | D      | A    | X         | D         | A         | B          |
| Pyroligneous Acid          | D       | X           | A    | X       | D         | D        | B        | D      | D       | X       | A             | D      | A    | B         | D         | A         | X          |
| Pyrolube                   | X       | A           | A    | X       | D         | D        | B        | A      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Pyrrole                    | X       | C           | A    | X       | D         | X        | D        | D      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Quarternary Ammonium Salts | X       | X           | A/21 | X       | A         | X        | X        | A      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Quench Oil                 | X       | X           | A/21 | X       | D         | A        | D        | A      | X       | X       | X             | X      | X    | A         | X         | A         | A          |
| Quinine Bisulphate (Dry)   | D       | X           | A    | X       | A         | A        | A        | A      | A       | X       | D             | D      | D    | D         | D         | B         | A          |
| Quinine Sulphate (Dry)     | D       | X           | A    | X       | A         | A        | A        | A      | A       | X       | D             | D      | D    | D         | D         | A         | A          |
| Radiation                  | X       | X           | A    | X       | C         | B        | C/21     | D      | X       | X       | X             | D      | X    | X         | X         | X         | X          |
| Rape Seed Oil              | X       | B           | A    | X       | B         | B/21     | A        | A      | D       | X       | X             | X      | X    | X         | A         | A         | A          |
| Red Line 100 Oil           | X       | X           | X    | X       | B         | A        | D        | A      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| RJ-1 (Mil-F-25558)         | X       | X           | X    | X       | B         | B        | D        | A      | A       | X       | X             | X      | X    | X         | X         | X         | X          |
| RP-1 (Mil-R-25576)         | X       | X           | X    | X       | C         | C        | D        | A      | A       | X       | X             | X      | X    | X         | X         | X         | X          |
| Rose Oil                   | X       | A           | X    | X       | C         | A        | X        | A      | X       | X       | X             | X      | X    | X         | X         | A         | X          |
| Rosins                     | A       | A           | A    | X       | A         | D        | D        | A      | D       | X       | A             | B      | X    | A         | D         | A         | A          |
| Rosin Paper Mill           | X       | A           | A    | X       | A         | D        | A        | A      | D       | X       | A             | B      | X    | A         | D         | A         | A          |
| Rotenone                   | X       | X           | A    | X       | A         | X        | A        | A      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Rum                        | A       | A           | A    | X       | A         | D        | A        | A      | X       | X       | A             | A      | X    | X         | X         | A         | A          |
| Rust Inhibitors            | A       | B           | X    | X       | C         | A        | X        | A      | X       | X       | A             | A      | X    | X         | C         | A         | X          |
| Sal Ammoniac               | X       | A           | A    | A       | A         | A        | A        | A      | A       | X       | A             | D      | A    | D         | D         | B         | A          |
| Sal Soda                   | A       | B           | A    | X       | A         | X        | A        | A      | X       | X       | X             | X      | X    | D         | A         | A         | A          |
| Salad Dressing             | D       | A           | X    | D       | D         | D        | D        | D      | X       | X       | A             | A      | X    | B         | D         | A         | X          |
| Salicylic Acid             | A       | A           | A    | X       | D         | X        | A        | A      | A       | X       | A             | X      | A    | A         | D         | B         | A          |
| Santo Safe 300             | X       | X           | A    | B       | D         | X        | C/21     | A      | A       | X       | X             | X      | X    | X         | X         | X         | X          |
| Salt Water                 | A       | A           | A    | X       | A         | D        | A        | A      | A       | A       | A             | A      | A    | D         | D         | C         | A          |
| Sea Water                  | A       | A           | A    | A       | A         | A        | A        | A      | A       | A       | A             | A      | A    | D         | D         | C         | A          |
| Sesame Seed oil            | A       | B           | X    | X       | C         | X        | X        | A      | X       | X       | X             | X      | X    | X         | A         | A         | X          |

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|----------------------------------|---------|-------------|------|---------|-----------|----------|----------|--------|---------|---------|---------------|--------|------|----------|-----------|-----------|------------|
| Sewage                           | A       | A           | A    | A       | A         | D        | A        | A      | A       | X       | A             | A      | A    | B        | B         | A         | A          |
| Shellac                          | A       | A           | A    | D       | D         | D        | A        | A      | D       | X       | A             | A      | X    | A        | A         | A         | A          |
| Silicate Esters                  | A       | B           | A    | C       | A         | B        | D        | A      | D       | X       | X             | X      | X    | X        | X         | X         | X          |
| Silicone Greases                 | A       | B           | A    | A       | A         | A        | A        | A      | A       | X       | X             | A      | X    | X        | X         | X         | X          |
| Silicone Oils                    | A       | C           | A    | B       | A         | A        | A        | A      | A       | X       | A             | A      | A    | B        | A         | A         | A          |
| Silicon Tetrachloride Wet        | X       | X           | X    | X       | X         | X        | X        | X      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Silver Bromide                   | X       | X           | A/21 | X       | X         | X        | X        | X      | X       | X       | X             | A      | X    | D        | D         | B         | A          |
| Silver Chloride                  | D       | X           | A/21 | X       | X         | X        | X        | X      | X       | X       | A             | X      | X    | X        | X         | X         | X          |
| Silver Cyanide                   | A       | X           | A    | X       | A         | D        | A        | A      | A       | X       | A             | X      | A    | D        | A         | A         | A          |
| Silver Nitrate                   | C       | A           | A    | D       | A         | A        | A        | A      | A       | X       | A             | A      | A    | D        | D         | A         | A          |
| *"Spelly, Solvent B,C,E"         | X       | X           | A    | X       | D         | X        | D        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Skydrol 500                      | D       | B           | A    | A       | D         | D        | A        | D      | X       | X       | X             | A      | X    | X        | X         | A         | A          |
| Skydrol 7000                     | X       | B           | A    | D       | D         | D        | A        | B/21   | X       | X       | X             | A      | X    | X        | X         | A         | A          |
| Soap Solutions                   | A       | A           | A    | A       | A         | A        | A        | A      | A       | X       | A             | A      | A    | C        | D         | A         | A          |
| Sodium Acid Sulfate              | A       | A           | A    | X       | A         | A        | A        | A      | A       | X       | A             | X      | X    | X        | B         | X         | X          |
| Sodium Aluminate                 | A       | A           | A    | X       | A         | X        | A        | A      | X       | X       | A             | A      | A    | C        | A         | A         | A          |
| Sodium Aluminium Sulfate         | A       | A           | A    | X       | A         | A        | A        | A      | X       | X       | X             | X      | X    | X        | X         | X         | B          |
| Sodium Bicarbonate               | A       | A           | A    | B       | A         | A        | A        | A      | A       | X       | A             | A      | A    | A        | C         | A         | B          |
| Sodium Bichromate                | B       | A           | A    | X       | A         | A        | A        | A      | A       | X       | A             | D      | A    | C        | C         | B         | C          |
| Sodium Bisulfate                 | A       | A           | A    | AC      | A         | A        | A        | A      | A       | X       | A             | A      | A    | D        | D         | A         | B          |
| Sodium Bisulfite                 | A       | A           | A    | B       | A         | A        | A        | A      | A       | X       | A             | A      | A    | A        | D         | A         | A          |
| Sodium Borate (Borax)            | A       | A           | A    | B       | A         | A        | A        | A      | A       | X       | A/60          | A      | A    | C        | B         | B         | A          |
| Sodium Bromide                   | X       | A           | A    | X       | A         | X        | A        | A      | A       | X       | A             | X      | A    | C        | C         | B         | B          |
| Sodium Carbonate                 | A       | A           | A    | B       | A         | A        | A        | A      | A       | X       | A             | A      | A    | C        | B         | A         | A          |
| Sodium Chlorate                  | A       | A           | A    | X       | A         | A        | A        | A      | A       | X       | A             | A      | A    | B        | B         | A         | A          |
| Sodium Chloride                  | A       | A           | A    | A       | A         | A        | A        | A      | A       | X       | A             | A      | A    | C        | B         | C         | A          |
| Sodium Chromate                  | A       | A           | A    | X       | A         | X        | X        | A      | X       | X       | A             | D      | A    | A        | A         | A         | A          |
| Sodium Citrate                   | D       | A           | X    | X       | X         | X        | X        | X      | A       | X       | X             | X      | X    | X        | X         | B         | B          |
| Sodium Cyanide                   | A       | A           | A    | B       | A         | A        | A        | A      | A       | X       | A             | B      | A    | D        | B         | A         | A          |
| Sodium Dichromate                | A       | A           | A    | B       | B         | B        | A        | B      | A       | X       | A             | X      | A    | X        | X         | X         | X          |
| Sodium Ferricyanide              | A       | A           | A    | X       | A         | X        | A        | A      | A       | X       | A             | X      | A    | A        | D         | B         | B          |
| Sodium Fluoride                  | A       | A           | A    | X       | A         | B        | A        | A      | A       | X       | A             | X      | A    | B        | X         | B         | B          |
| Sodium Hydroxide                 |         |             |      |         |           |          |          |        |         | X       |               |        |      |          |           |           |            |
| 20% (Cold)                       | B       | A           | A    | A       | B         | B        | A        | A      | A       | X       | A             | A      | A    | D        | B         | A         | B          |
| 50% Solution (Cold)              | D       | A           | A    | B       | C         | B        | A        | A      | A       | X       | A             | A      | C    | D        | C         | B         | A          |
| 80% Solution (Cold)              | D       | X           | A    | D       | C         | B        | A        | A      | A       | X       | A             | A      | C    | D        | C         | D         | B          |
| Sodium Hydrosulfate              | X       | X           | X    | X       | X         | X        | X        | X      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Sodium Hypochlorite 0-20%        | D       | B           | A    | C       | B         | D        | B        | C      | A       | X       | B             | D      | A    | D        | D         | C         | A          |
| Sodium Metasilicate              | A       | A           | A    | X       | A         | B/21     | A        | A      | X       | X       | A             | B      | A    | B        | X         | A         | A          |
| Sodium Nitrate                   | C       | A           | A    | B       | B         | B/21     | A        | A      | A       | X       | A             | A      | A    | A        | A         | A         | A          |
| Sodium Perborate                 | B       | A           | A    | B       | B         | B/21     | A        | A      | A       | X       | A             | B      | A    | D        | B         | A         | B          |
| Sodium Peroxide (Sodium Dioxide) | B       | B           | A    | B       | B         | D        | A        | A      | A       | X       | B             | F      | A    | B        | A         | B         | B          |
| Sodium Phosphate                 | A       | A           | A    | C       | A         | A        | A        | A      | A       | X       | A             | A      | A    | D        | B         | B         | A          |
| Sodium Phosphate (Mono)          | A       | A           | A    | B       | C         | A        | A        | A      | X       | X       | A             | A      | A    | D        | D         | A         | X          |
| Sodium Phosphate (Dibasic)       | B       | A           | A    | B       | B         | A        | A        | A      | X       | X       | A             | A      | A    | D        | D         | A         | X          |

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|------------------------------------|---------|-------------|------|---------|-----------|----------|----------|--------|---------|---------|---------------|--------|------|-----------|-----------|-----------|------------|
| Sodium Phosphate (Tribasic)        | B       | A           | A    | B       | C         | A        | A        | A      | A       | X       | A             | A      | A    | D         | D         | A         | A          |
| Sodium Silicate (Water Glass)      | A       | A           | A    | B       | A         | B        | A        | A      | A       | X       | A             | C      | A    | C         | B         | A         | B          |
| Sodium Sulfate (Salt Cake)         | A       | A           | A    | B       | A         | A        | A        | A      | A       | X       | A             | B      | A    | B         | A         | A         | B          |
| Sodium Sulfide                     | A       | A           | A    | B       | A         | A        | A        | A      | A       | X       | A             | B      | A    | D         | A         | A         | B          |
| Sodium Sulfide - Saturated         | A       | A           | A    | B       | A         | A        | B        | B      | A       | X       | A             | A      | A    | D         | B         | B         | A          |
| Sodium Sulfite                     | A       | A           | A    | B       | A         | A        | A        | A      | A       | X       | A             | A      | A    | A         | D         | A         | B          |
| Sodium Tetraborate                 | B       | A           | A    | B       | A         | B        | A        | A      | A       | X       | A             | A      | A    | A         | B         | A         | B          |
| Sodium Tetrphosphate               | X       | A           | X    | X       | X         | X        | X        | X      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Sodium Thiosulfate (Antichlor)     | A       | A           | A    | X       | X         | X        | X        | X      | X       | X       | A             | B      | A    | A         | C         | A         | B          |
| Sodium Triphosphate                | X       | X           | A    | B       | A         | A        | A        | A      | X       | X       | A             | C      | A    | B         | C         | A         | A          |
| Sorghum                            | A       | A           | X    | X       | A         | X        | X        | A      | X       | X       | X             | A      | X    | X         | A         | A         | A          |
| Soybean Oil                        | A       | C           | A    | B       | A         | B/21     | D        | A      | A       | X       | B             | B      | X    | A         | A         | A         | A          |
| Soy Sauce                          | A       | A           | X    | X       | A         | B        | X        | A      | X       | X       | X             | A      | X    | A         | D         | A         | X          |
| Sperm Oil (Whale Oil)              | X       | B           | X    | X       | D         | X        | D        | A      | X       | X       | X             | X      | X    | X         | A         | A         | A          |
| Spry                               | X       | X           | X    | X       | B         | A        | B/21     | A      | A       | X       | X             | X      | X    | X         | X         | X         | X          |
| SR-6 Fuel                          | X       | X           | X    | X       | D         | B/21     | D        | A      | A       | X       | X             | X      | X    | X         | X         | X         | X          |
| SR-10 Fuel                         | X       | X           | X    | X       | D         | B/21     | D        | A      | A       | X       | X             | X      | X    | X         | X         | X         | X          |
| Stannic Chloride                   | A       | A           | A    | B       | C         | B        | A        | A      | A       | X       | A             | B      | A    | D         | D         | D         | B          |
| Stannic Fluoroborate               | X       | X           | X    | X       | A         | X        | X        | A      | X       | X       | X             | C      | X    | D         | D         | X         | X          |
| Stannous Chloride                  | A       | B           | A    | B       | A         | C        | B        | A      | X       | X       | A             | X      | A    | D         | B         | A         | A          |
| Starch                             | A       | A           | A    | B       | A         | A        | A        | A      | A       | A       | A             | B      | X    | A         | C         | A         | A          |
| Stearic Acid                       | B       | A           | A    | B       | B         | A        | B        | A      | A       | X       | B/22          | A      | A    | B         | X         | A         | A          |
| Stoddard Solvent                   | B       | D           | A    | C       | D         | A        | D        | A      | X       | A       | A/21          | A      | A    | A         | A         | A         | A          |
| Styrene (Vinyl Benzene)            | D       | C           | A    | D       | D         | D        | D        | B      | A       | X       | D             | A      | A    | A         | B         | A         | D          |
| Sucrose Solutions (Sugar)          | A       | A           | A    | B       | A         | A        | A        | A      | A       | X       | X             | A      | X    | A         | B         | A         | A          |
| Sugar Liquids                      | A       | A           | A    | B       | A         | D        | A        | A      | A       | A       | A             | A      | A    | A         | A         | A         | A          |
| Sulfate Black Liquor               | B       | A           | A    | B       | A         | A        | A        | A      | A       | X       | A             | D      | A    | B         | C         | A         | A          |
| Sulfate Green Liquor               | B       | A           | A    | B       | A         | A        | A        | A      | A       | X       | A             | D      | A    | B         | C         | A         | A          |
| Sulfite Liquor                     | B       | A           | A    | X       | A         | C        | B/21     | A      | X       | X       | B             | X      | X    | D         | D         | B         | A          |
| Sulfur                             | B       | A           | A    | X       | B         | B        | A        | A      | A       | X       | A             | A      | A    | A         | A         | A         | B          |
| Sulfur Chloride                    | D       | D           | A    | C/21    | A         | C/21     | D        | A      | C       | X       | C             | D      | A/21 | B         | D         | B         | A          |
| Sulfur Dioxide                     | D       | A           | A    | D       | A         | C        | A        | A      | A       | X       | A             | D      | A    | D         | D         | A         | B          |
| Sulfur Hexafluoride                | C       | B           | A    | B       | B         | B        | A        | C      | A       | X       | X             | D      | X    | D         | D         | X         | D          |
| Sulfur Trioxide                    | D       | D           | A    | D       | A         | C        | C        | A      | X       | X       | D             | X      | C    | D         | D         | B         | B          |
| Sulfuric Acid - Dilute             | D       | A           | A    | A       | C         | C        | A        | A      | X       | X       | A             | D      | A    | D         | D         | B         | A          |
| Sulfuric Acid - (To 10%)           | D       | A           | A    | A       | D         | D        | A        | A      | D       | X       | A/49          | D      | A    | D         | D         | C         | A          |
| Sulfuric Acid - (To 75%)           | D       | A           | A    | B       | D         | D        | C        | A      | D       | X       | A/22          | D      | A/66 | D         | D         | C         | B          |
| Concentrated                       | D       | B           | A    | C       | D         | D        | C        | A      | D       | X       | C/22          | D      | A/49 | D         | D         | B         | A          |
| (Fuming) Oleum                     | D       | A           | A    | B       | D         | D        | B        | A      | D       | X       | D             | D      | D    | C         | D         | B         | B          |
| Sulfurous Acid                     | D       | X           | A    | D       | D         | D        | D        | D      | A       | X       | A             | D      | A    | D         | D         | B         | B          |
| Sunsafe (Fire Resist. Hydr. Fluid) | B       | D           | A    | A       | B         | D        | D        | A      | X       | X       | X             | X      | X    | X         | X         | X         | X          |
| Syrup                              | A       | A           | X    | X       | B         | X        | A        | A      | X       | X       | A             | A      | X    | A         | X         | A         | X          |
| Tall Oil                           | A       | D           | A    | X       | D         | A        | D        | A      | A       | X       | A             | X      | A    | D         | C         | B         | A          |
| Tallow                             | B       | B           | A    | X       | D         | A        | A        | A      | A       | X       | B/21          | A      | X    | A         | X         | A         | X          |
| Tannic Acid                        | A       | A           | A    | A       | A         | A        | A        | A      | A       | X       | A             | D      | A    | D         | C         | A         | B          |

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|--------------------------------------|---------|-------------|------|---------|-----------|----------|----------|--------|---------|---------|---------------|--------|------|----------|-----------|-----------|------------|
| Tanning Oils                         | X       | X           | A    | X       | D         | X        | X        | A      | A       | X       | A             | D      | A    | A        | X         | A         | A          |
| Tar and Tar Oil                      | X       | X           | A    | C       | C         | D        | X        | X      | C       | X       | A             | A      | A    | A        | C         | B         | X          |
| "Tar, Bituminous"                    | B       | B           | A    | B       | C         | B/21     | D        | A      | X       | X       | A             | A      | X    | A        | X         | A         | A          |
| Tartaric Acid                        | B       | A           | A    | (B)     | A         | A        | C        | A      | A       | X       | A             | D      | A    | A        | D         | A         | A          |
| Terpene Monocyclic                   | X       | X           | A    | X       | A         | X        | D        | A      | X       | X       | X             | X      | X    | A        | D         | X         | X          |
| Terpineol                            | D       | B           | A    | X       | D         | B/21     | C/21     | A      | X       | X       | D             | X      | B/49 | A        | A         | A         | A          |
| Tertiary Butyl Alcohol               | D       | B           | A    | X       | B         | D        | B/21     | A      | X       | X       | B             | A      | X    | X        | X         | X         | X          |
| P-Tertiary Butyl Catechol            | X       | B           | A    | X       | B         | X        | B/21     | A      | X       | X       | X             | A      | X    | C        | B         | B         | X          |
| Tertiary Butyl Mercaptan             | X       | B           | A    | X       | D         | D        | D        | A      | X       | X       | X             | B      | X    | X        | X         | X         | X          |
| Tetra Bromoethane                    | D       | D           | A    | X       | D         | X        | D        | A      | X       | X       | D             | X      | X    | D        | X         | X         | X          |
| Tetrabutyl Titanate                  | X       | B           | A    | X       | B         | X        | A        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Tetrachlorodifluoroethane            | D       | D           | A    | X       | D         | X        | D        | X      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Tetrachloroethylene                  | D       | D           | A    | X       | D         | D        | D        | A      | B       | X       | D             | A      | A/77 | D        | A         | A         | X          |
| Tetraethyl Lead                      | B       | C           | A    | B       | C         | B        | D        | A      | C       | X       | A             | X      | A    | B        | A         | A         | X          |
| Tetraethylene Glycol                 | X       | X           | A    | X       | X         | X        | X        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Tetrahydrofuran                      | D       | B           | A    | B       | D         | D        | D        | D      | B       | X       | C             | A      | B/21 | X        | X         | A         | A          |
| Tetralin                             | D       | C           | A    | X       | D         | D        | D        | A      | X       | X       | D             | X      | X    | A        | A         | A         | A          |
| Thiokol TP-90B                       | X       | X           | X    | X       | B         | X        | A        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| TP-95                                | X       | X           | X    | X       | B         | X        | A        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Thionyl Chloride                     | X       | X           | X    | X       | X         | X        | X        | X      | D       | X       | B             | B      | D    | C        | D         | D         | A          |
| Thiophene                            | D       | D           | A    | X       | D         | X        | D        | C      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Tin Tetrachloride                    | A       | X           | A    | X       | D         | B/21     | X        | X      | X       | X       | A             | X      | A    | D        | D         | D         | A          |
| Titanium Tetrachloride               | C       | D           | A    | X       | D         | D        | D        | A      | C       | X       | D             | X      | B    | D        | A         | B         | B          |
| Toluene (Toluol)                     | C       | D           | A    | C       | D         | D        | D        | B      | D       | X       | D             | A      | A    | A        | A         | A         | A          |
| Toluene Di-Isocyanate (Hylene)       | X       | B           | A    | B       | D         | X        | A        | C      | X       | X       | X             | C      | X    | X        | X         | X         | X          |
| Toluidine                            | X       | X           | A    | X       | X         | X        | X        | B/21   | X       | X       | X             | X      | X    | A        | A         | A         | A          |
| Tomato Pulp & Juice                  | A       | A           | A    | X       | A         | A        | A        | A      | A       | X       | A             | A      | A    | B        | X         | A         | A          |
| Transformer Oils                     | B       | D           | A    | X       | B         | A        | D        | A      | A       | X       | B/21          | A      | A    | A        | A         | A         | A          |
| "Transmission Fluid, Type A"         | X       | C           | A    | B       | B         | A        | D        | A      | X       | X       | X             | A      | X    | A        | A         | A         | A          |
| Triacetin                            | X       | A           | A    | X       | B         | D        | A        | D      | X       | X       | X             | X      | X    | B        | X         | X         | X          |
| Triaryl Phosphate                    | D       | X           | A    | X       | D         | D        | A        | A      | A       | X       | B             | X      | A    | X        | X         | X         | X          |
| Tributoxyl Ethyl Phosphate           | X       | B           | A    | X       | D         | D        | A        | A      | A       | X       | X             | X      | X    | X        | X         | X         | X          |
| Tributyl Mercaptan                   | X       | B           | A    | X       | D         | X        | D        | A      | A       | X       | X             | X      | X    | X        | X         | X         | X          |
| Tributyl Phosphate                   | D       | B           | A    | C       | D         | D        | B        | D      | X       | X       | B             | X      | A    | A        | A         | A         | X          |
| Trichloroacetic Acid                 | D       | B           | A    | D       | D         | D        | B/21     | D      | C       | X       | B/60          | D      | A/21 | D        | D         | D         | B          |
| Trichlorobenzenes                    | X       | X           | A    | X       | D         | D        | X        | A      | X       | X       | X             | X      | X    | D        | A         | A         | B          |
| Trichloroethane                      | D       | D           | A    | D       | D         | D        | D        | A      | D       | X       | D             | A      | B/66 | D        | A         | A         | A          |
| Trichloroethylene (Triad)            | D       | D           | A    | D       | D         | D        | D        | C      | X       | X       | C/21          | B      | A    | B        | B         | B         | B          |
| Trichloromonofluoroethane (Freon 17) | D       | X           | X    | X       | D         | X        | X        | X      | X       | X       | X             | X      | X    | A        | X         | A         | A          |
| Trichloropropane                     | D       | D           | A    | X       | A         | A        | X        | A      | X       | X       | D             | A      | X    | D        | A         | A         | A          |
| Trichlorotrifluoroethane (Freon 113) | A       | D           | A    | A       | A         | B        | D        | A      | X       | X       | A             | X      | A    | A        | A         | A         | A          |
| Tricresyl Phosphate                  | D       | B           | A    | C       | C         | D        | A        | A      | A       | X       | B             | C      | D    | D        | A         | A         | A          |
| Tridecyl Alcohol (Tridecanol)        | X       | X           | A/77 | X       | X         | B        | X        | B/21   | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Triethanol Amine                     | D       | A           | A    | C       | A         | D        | A        | D      | A       | X       | A/21          | A      | A    | B        | A         | A         | A          |
| Triethyl Aluminium                   | X       | B           | A    | D       | D         | X        | X        | B/21   | X       | XX      | X             | X      | X    | X        | X         | X         | X          |

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|----------------------------------|---------|-------------|------|---------|-----------|----------|----------|--------|---------|---------|---------------|--------|------|----------|-----------|-----------|------------|
| Triethyl Amine                   | D       | D           | A    | X       | B         | D        | A        | A      | X       | XX      | C             | A      | A/49 | X        | A         | A         | A          |
| Triethylene Glycol (TEG)         | A       | X           | A    | X       | X         | X        | X        | A      | A       | X       | A             | X      | X    | X        | X         | X         | X          |
| Triethyl Borane                  | X       | B           | A    | X       | D         | X        | X        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Trifluoroethane                  | X       | X           | A    | X       | D         | D        | D        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Trimethylene Glycol              | X       | X           | A    | X       | X         | X        | A        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Trinitrotoluene (TNT)            | X       | A           | A    | X       | B         | X        | D        | B/21   | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Trioctyl Phosphate               | X       | B           | A    | X       | D         | D        | A        | B      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Triphenyl Phosphite              | D       | X           | A    | X       | X         | X        | X        | C/21   | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Trisodium Phosphate              | A       | A           | A    | A       | A         | B        | A        | A      | X       | X       | A             | D      | A    | D        | A         | B         | A          |
| Tung Oil                         | D       | B           | A    | (B)     | A         | B        | D        | A      | A       | X       | A             | X      | A    | A        | B         | A         | A          |
| Turbine Oil                      | X       | X           | A    | X       | B         | A        | D        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Turbine Oil #15 (Mil -L-7808A)   | X       | X           | A    | X       | D         | D        | D        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Turbo Oil #35                    | X       | X           | X    | X       | B         | A        | D        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Turpentine                       | B       | D           | A    | B       | D         | D        | D        | A      | D       | X       | B/49          | A      | A    | A        | B         | A         | B          |
| Type 1 Fuel (Mil-S-3136)         | X       | D           | A    | A       | A         | B        | D        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Type 11 Fuel (Mil-S-3136)        | X       | D           | A    | X       | D         | B/21     | D        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Type 111 (Fuel Mil-S-3136)       | X       | D           | A    | A       | D         | B/21     | D        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Univis 40 (Hydr. Fluid)          | X       | D           | A    | X       | B         | A        | D        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Univolt #35 (Mineral Oil)        | X       | C           | A    | X       | B         | A        | D        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Unsymmetrical Dimethyl Hydrazine | X       | B           | A    | X       | B         | D        | A        | D      | X       | X       | X             | X      | A/21 | B        | A         | A         | X          |
| Urea (Carbamide)                 | B       | A           | A    | B       | A         | B        | A        | A      | A       | X       | A             | A      | A    | B        | X         | B         | B          |
| Uric Acid                        | X       | X           | A    | D       | X         | D        | X        | X      | X       | X       | D             | D      | D    | D        | X         | B         | B          |
| Urine                            | A       | A           | A    | X       | D         | X        | A        | A      | A       | X       | A             | C      | A    | B        | B         | A         | A          |
| Valeric Acid                     | X       | X           | A    | X       | D         | X        | A        | X      | X       | X       | X             | X      | X    | A        | X         | X         | X          |
| Vanilla Extract                  | X       | A           | A    | X       | A         | X        | X        | X      | A       | X       | X             | X      | X    | X        | X         | A         | X          |
| Varnish                          | B/21°   | D           | A    | X       | D         | B        | D        | A      | A       | A       | A             | X      | A    | A        | X         | A         | A          |
| Vegetable Juices                 | X       | A           | D    | X       | B         | B        | A        | A      | X       | X       | X             | A      | X    | C        | X         | A         | X          |
| Vegetable Oil                    | A       | A           | A    | X       | B         | A        | A        | A      | D       | A       | A             | A      | A    | A        | B         | A         | A          |
| Versilube                        | X       | X           | A    | X       | A         | A        | A        | A      | A       | X       | X             | X      | X    | X        | X         | X         | X          |
| Versilube F-50                   | X       | X           | A    | X       | A         | A        | A        | A      | A       | X       | X             | X      | X    | X        | X         | X         | X          |
| Vinegar                          | B       | A           | A    | C       | B         | B        | A        | A      | A       | A       | A             | B      | A    | D        | C         | A         | A          |
| Vinyl Acetate                    | D       | B           | A    | X       | D         | D        | B        | A      | D       | X       | B/27          | X      | A    | B        | A         | A         | A          |
| Vinyl Chloride (Chloroethylene)  | X       | X           | A    | X       | D         | X        | C        | A      | X       | X       | D             | X      | A    | D        | B         | A         | A          |
| Walnut Oil                       | X       | X           | A    | X       | B         | X        | X        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| "Water, Acid Mine"               | A       | A           | A    | X       | C         | C        | A        | A      | A       | X       | A             | A      | A    | D        | D         | A         | A          |
| "Water, Fresh"                   | A       | A           | A    | A       | A         | A        | A        | B      | A       | A       | A             | A      | A    | A        | B         | A         | A          |
| "Water, Distilled"               | A       | A           | A    | X       | B         | A        | A        | A      | A       | A       | A             | A      | A    | B        | D         | A         | A          |
| "Water, Salt"                    | A       | A           | A    | A       | A         | B        | A        | A      | A       | A       | A             | A      | A    | D        | D         | C         | X          |
| "Water-Brine, Process, Beverage" | X       | A           | D    | X       | A         | D        | A        | A      | A       | X       | X             | X      | X    | X        | X         | X         | X          |
| Waxes                            | D       | X           | A    | X       | A         | A        | B        | A      | A       | X       | D             | A      | D    | D        | D         | D         | A          |
| Wemco C                          | X       | X           | A    | X       | B         | A        | D        | A      | X       | X       | X             | A      | X    | X        | X         | A         | X          |
| Whey                             | A       | A           | X    | X       | X         | X        | X        | A      | X       | X       | X             | X      | X    | B        | X         | A         | X          |
| Whiskey and Wines                | A       | A           | A    | B       | A         | D        | A        | A      | A       | X       | A             | A      | A    | D        | D         | A         | A          |
| White Liquor (Pulp Mill)         | A       | A           | A    | X       | A         | D        | A        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| White Pine Oil                   | X       | A           | A    | D       | D         | X        | D        | A      | A       | X       | X             | A      | X    | X        | X         | X         | X          |



# COMPATIBILITY GUIDE

A = Excellent, B = Good, C = Fair to Poor, D = Not recommended

X or Brackets around a rating letter, no data is available, but the ratings are made on the basis of exposure test in similar chemical groups.

\*All degrees are in Fahrenheit



| MATERIAL           | NITRILE | SANTOPRENE® | PTFE | HYTREL® | NEOPRENE® | URETHANE | EPR/EPDM | VITON® | UHMW-PE | LEATHER | POLYPROPYLENE | ACETAL | PVDF | ALUMINUM | CAST IRON | STAINLESS | HASTELLOY® |
|--------------------|---------|-------------|------|---------|-----------|----------|----------|--------|---------|---------|---------------|--------|------|----------|-----------|-----------|------------|
| White Oil          | X       | C           | A    | X       | B         | A        | D        | A      | X       | X       | X             | A      | X    | X        | X         | A         | A          |
| Wolmar Salt        | X       | X           | A    | X       | B         | A        | A        | A      | X       | X       | X             | X      | X    | X        | X         | X         | X          |
| Wood Alcohol       | X       | X           | A    | X       | A         | D        | A        | D      | A       | X       | X             | X      | X    | X        | X         | X         | X          |
| Wood Oil           | X       | X           | A    | A       | D         | C/21     | D        | A      | A       | X       | X             | X      | X    | A        | A         | A         | X          |
| "Wort, Distillery" | X       | X           | X    | X       | B         | B/21     | A        | A      | X       | X       | X             | X      | X    | A        | B         | A         | A          |
| Xylene (Xylol)     | C       | D           | A    | B       | D         | D        | D        | A      | D       | X       | B             | A      | A    | A        | A         | A         | A          |
| Zeolites           | X       | A           | A    | X       | C         | X        | A        | A      | X       | X       | X             | X      | X    | X        | X         | A         | A          |
| Zinc Acetate       | B       | A           | A    | X       | B         | D        | A        | B      | A       | X       | A             | X      | A    | C        | X         | A         | X          |
| Zinc Carbonate     | A       | A           | A    | X       | A         | A        | A        | A      | A       | X       | X             | X      | X    | B        | B         | B         | B          |
| Zinc Chloride      | A       | A           | A    | A       | A         | A        | A        | A      | A       | X       | A             | D      | A    | D        | D         | C         | A          |
| Zinc Hydrosulphite | A       | A           | (A)  | X       | A         | X        | A        | X      | X       | X       | X             | C      | A    | D        | X         | A         | X          |
| Zinc Salts         | A       | A           | A    | X       | A         | A        | A        | A      | X       | X       | A             | X      | A    | X        | X         | X         | X          |
| Zinc Sulfate       | A       | A           | A    | C       | A         | A        | A        | A      | A       | X       | A             | C      | A    | D        | D         | A         | A          |

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