

Steam Hose Safety Facts



(Reprinted from RMA IP-11-1 Steam Hose)

Handling steam is a very hazardous situation. Using care and some safety precaution can minimize or eliminate personal or property damage.

SELECTING AND USING STEAM HOSE

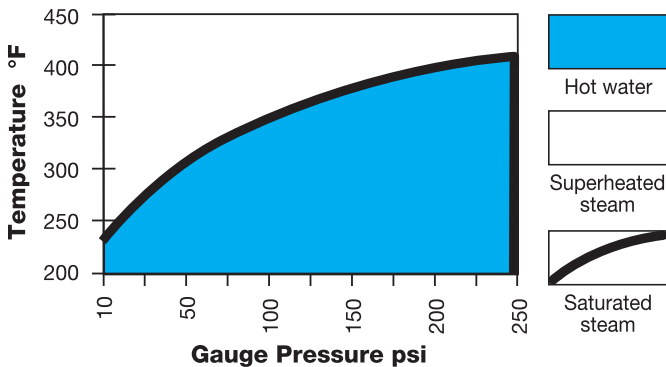
1. Make sure steam hose is identified as a steam hose. It should be branded as such, stating working pressure and temperature rating.
2. Make sure working pressure and temperature is not exceeded.
3. Do not allow hose to remain under pressure when not in use.
4. Avoid excess bending or flexing of hose near the coupling. Straight line operation is preferred. If bends are necessary as part of operation, spring guards may help.
5. Be sure and use recommended steam hose couplings and clamps on hose.

MAINTENANCE OF STEAM HOSE

1. Periodic inspection of hose should include looking for cover blisters and lumps.
2. Check for kinked areas that could damage hose.
3. Drain hose after each use to avoid tube damage before hose is put back in operation, to avoid "popcorning" of the tube.
4. Check tightness of clamps bolts after each use.
5. Check to see if clamps halves are touching. If they are, recouple hose with smaller clamps to insure proper tightness or grip around hose.
6. Do not store hose over hooks.
7. Steam hose lying on metal racks or installed around steel piping will dry out the hose, causing tube and cover cracking.
8. For service in sub-zero application, use only T-341 chlorbutyl hose.

The chart represents the three forms of water when subjected to heat and pressure. Use only hoses specifically designed for the application.

| Gauge Pressure (psi) | Temperature of Saturated Steam (°F) |
|----------------------|-------------------------------------|
| 10 | 239 |
| 25 | 267 |
| 50 | 298 |
| 75 | 320 |
| 100 | 338 |
| 125 | 353 |
| 150 | 366 |
| 175 | 377 |
| 200 | 388 |
| 225 | 397 |
| 250 | 406 |



SELECTING AND USING STEAM HOSE

| Gauge Pressure | | Temperature | |
|----------------|-------|-------------|-----|
| psi | bar | °C | °F |
| 25 | 1.73 | 130 | 267 |
| 30 | 2.07 | 134 | 274 |
| 35 | 2.42 | 138 | 281 |
| 40 | 2.76 | 141 | 287 |
| 45 | 3.11 | 144 | 292 |
| 50 | 3.45 | 148 | 298 |
| 60 | 4.14 | 153 | 307 |
| 70 | 4.83 | 158 | 316 |
| 80 | 5.52 | 162 | 324 |
| 90 | 6.21 | 166 | 330 |
| 100 | 6.90 | 170 | 338 |
| 120 | 8.28 | 177 | 350 |
| 140 | 9.66 | 182 | 361 |
| 160 | 11.04 | 188 | 371 |
| 180 | 12.42 | 193 | 379 |
| 200 | 13.80 | 198 | 388 |
| 225 | 15.53 | 203 | 397 |
| 250 | 17.25 | 208 | 406 |
| 275 | 18.98 | 212 | 414 |
| 300 | 20.70 | 216 | 422 |
| 325 | 22.43 | 221 | 429 |
| 350 | 24.15 | 225 | 437 |

CORROSIVE STEAM

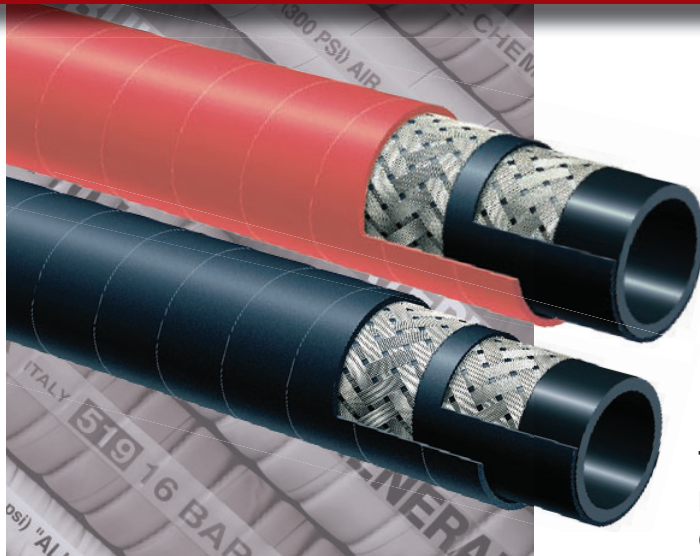
When the water used to generate steam contains dissolved air, oxygen or carbon dioxide, then these gases end up as contaminants in the steam. At high temperatures of steam both oxygen and carbon dioxide are extremely corrosive.

Carbon dioxide is acidic and therefore attacks metals whereas the oxygen corrodes metals and oxidizes rubbers. Corrosion of metals in the presence of both oxygen and acids is forty times faster than with either alone. Boiler water is therefore normally treated not only to remove the "hardness" which would cause "furring" of the boiler but also to remove dissolved oxygen and carbon dioxide and to ensure that the steam is not only not acidic but even slightly alkaline. Boiler water treatment is a specialised subject beyond the scope of this technical sheet but correct steam generation is important.

DETERIORATION OF STEAM HOSE

Like all rubber products steam hoses have a finite life and are subject to gradual deterioration with use. However, it sometimes happens that hoses which have been giving a good life suddenly start failing without apparent reason. In such cases it is often a change in the steam conditions causing a rapid acceleration of a normal failure mode. It is therefore useful to consider how steam hoses normally last and thus how the condition of the steam affects hose life.

BECAUSE WE CONTINUALLY EXAMINE WAYS TO IMPROVE OUR PRODUCTS, WE RESERVE THE RIGHT TO ALTER SPECIFICATIONS OR DISCONTINUE PRODUCTS WITHOUT PRIOR NOTICE.



plastiXs®
manufacturing solutions

T340AH / T340AA
270 PSI EPDM
Braided Steam Hose

T340AH
Red
Cover

T340AA
Black
Cover

Warning
Handling steam is very hazardous. If it is not properly controlled it can cause property damage, injury or even death. Selection for the proper application, usage, and maintenance will not only increase hose life but will insure safe operation for the user.

Applications:

The transfer of saturated steam up to 270 PSI and 410°F (+210°C).

- ★ **Use with superheated steam will shorten hose life. Proper draining of steam hose after each use will increase service life.**
- ★ **Not recommended for washdown applications where detergent or oils are present.**

Cover:

Red or black EPDM – heat-resistant. Wrapped cover fabric impression. Pin-pricked cover to allow venting.

Reinforcement:

High tensile steel wire braids (1/2" ID – 1 wire braid, 3/4" and higher ID's – 2 wire braids).

Tube:

Black extruded EPDM – heat-resistant.

Not for steam cleaner use.

Working Pressure:

Constant Pressure – 18 Bar (270 PSI)

Temperature Range:

-40°F (-40°C) to 410°F (+210°C)

Branding:

ALFAGOMMA – ITALY T340 18 BAR (270 PSI) STEAM – DRAIN AFTER USE – QTR/YEAR (embossed)

Standard Length:

50 or 100 feet
100 feet – 2 1/2"
200 feet – 3/4"

Nominal Specifications

| Series | ID (in.) | ID (mm) | OD (in.) | OD (mm) | Max Rec. WP (PSI) | Min. Bending Radius (in. @ 68°F) | Weight (lbs./ft.) |
|--------------|----------|---------|----------|---------|-------------------|----------------------------------|-------------------|
| T340AH/AA050 | 1/2 | 13 | 0.91 | 23 | 270 | 5 | 0.28 |
| T340AH/AA075 | 3/4 | 19 | 1.22 | 31 | 270 | 7 1/2 | 0.52 |
| T340AH/AA100 | 1 | 25 | 1.50 | 38 | 270 | 10 | 0.60 |
| T340AA200 | 2 | 51 | 2.64 | 67 | 270 | 20 | 1.38 |
| T340AA250 | 2 1/2 | 63 | 3.19 | 81 | 270 | 25 | 1.99 |
| T340AA300 | 3 | 76 | 3.70 | 94 | 270 | 30 | 2.50 |

REFER TO STEAM HOSE SAFETY FACTS ON PAGE 24.

COUPLING SUGGESTIONS

Steel or malleable iron male insert NPT or female ground joint or washer type with spuds attached with 2 or 4 bolt interlocking clamps.

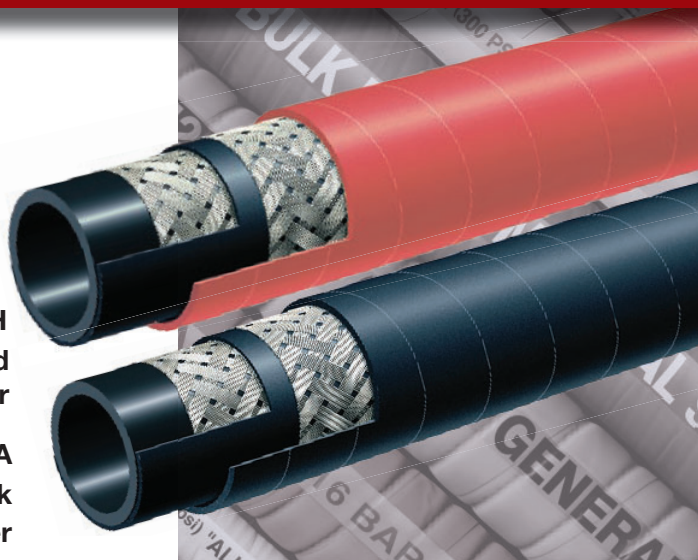
- ★ Kuriyama offers a full line of ground joint couplings and clamps. Refer to current Kuriyama-Couplings™ and Accessories Catalog for type and pricing.
- ★ Universal quick-acting couplings should not be used with steam hose.



T341AH / T341AA 270 PSI Chlorobutyl Braided Steam Hose

T341AH
Red
Cover

T341AA
Black
Cover



Applications:

The transfer of saturated and superheated steam up to 270 PSI and max 410°F (+210°C) in shipyards, chemical plants and industrial applications.

- ★ Proper draining of steam hose after each use will increase service life.
- ★ Not recommended for washdown applications where detergent or oils are present.

Cover:

Red or black EPDM – heat-resistant. Wrapped cover fabric impression. Pin-pricked cover to allow venting.

Reinforcement:

High tensile steel wire braids (1/2" ID – 1 wire braid, 3/4" and higher ID's – 2 wire braids).

Tube:

Black extruded CIIR – heat-resistant.

Not for steam cleaner use.

Warning

Handling steam is very hazardous. If it is not properly controlled it can cause property damage, injury or even death. Selection for the proper application, usage, and maintenance will not only increase hose life but will insure safe operation for the user.

Working Pressure:

Constant Pressure – 18 Bar (270 PSI)

Temperature Range:

-40°F (-40°C) to 410°F (+210°C)

Branding:

ALFAGOMMA – ITALY T341 18 BAR (270 PSI) STEAM – DRAIN AFTER USE – QTR/YEAR (embossed)

Standard Length:

50 or 100 feet

Nominal Specifications

| Series | ID (in.) | ID (mm) | OD (in.) | OD (mm) | Max Rec. WP (PSI) | Min. Bending Radius (in. @ 68°F) | Weight (lbs./ft.) |
|--------------|----------|---------|----------|---------|-------------------|----------------------------------|-------------------|
| T341AH/AA050 | 1/2 | 13 | 0.91 | 23 | 270 | 5 | 0.29 |
| T341AH/AA075 | 3/4 | 19 | 1.22 | 31 | 270 | 7 1/2 | 0.53 |
| T341AH/AA100 | 1 | 25 | 1.50 | 38 | 270 | 10 | 0.62 |
| T341AH/AA125 | 1 1/4 | 32 | 1.81 | 46 | 270 | 12 1/2 | 0.89 |
| T341AH/AA150 | 1 1/2 | 38 | 2.05 | 52 | 270 | 15 | 0.97 |
| T341AH/AA200 | 2 | 51 | 2.64 | 67 | 270 | 20 | 1.44 |

*T341AA/AH 1 1/4", 1 1/2" & 2" not suitable for "Ship to Shore" service.

REFER TO STEAM HOSE SAFETY FACTS ON PAGE 24.

COUPLING SUGGESTIONS

Steel or malleable iron male insert NPT or female ground joint or washer type with spuds attached with 2 or 4 bolt interlocking clamps.

- ★ Kuriyama offers a full line of ground joint couplings and clamps. Refer to current Kuriyama-Couplings™ and Accessories Catalog for type and pricing.
- ★ Universal quick-acting couplings should not be used with steam hose.



NEW PRODUCT

plastiXs®
manufacturing solutions

T343AH
270 PSI Braided Refinery
Steam hose

Warning

Handling steam is very hazardous. If it is not properly controlled it can cause property damage, injury or even death. Selection for the proper application, usage, and maintenance will not only increase hose life but will insure safe operation for the user.

Applications:

Saturated and superheated steam in applications where an oil resistant cover is needed.

- ★ **Use with superheated steam will shorten hose life. Proper draining of steam hose after each use will increase service life.**
- ★ **Not recommended for washdown applications where detergent or oils are present.**

Cover:

Red special compound - heat, oil-resistant, ozone and hydrocarbon resistant. Pin-pricked cover to allow venting.

Reinforcement:

High tensile steel wire braids.

Tube:

Black extruded EPDM – heat-resistant.

Not for steam cleaner use.

Working Pressure:

Constant Pressure – 18 Bar (270 PSI)

Temperature Range:

-40°F (-40°C) to 410°F (+210°C)

Branding:

Embossed brand ALFAGOMMA – ITALY T343 18 BAR (270 PSI) STEAM – DRAIN AFTER USE – QTR/YEAR

Standard Length:

50 or 100 feet

Nominal Specifications

| Series | ID (in.) | ID (mm) | OD (in.) | OD (mm) | Max Rec. WP (PSI) | Min. Bending Radius (in. @ 68°F) | Weight (lbs./ft.) |
|-----------|----------|---------|----------|---------|-------------------|----------------------------------|-------------------|
| T343AH075 | 3/4 | 19 | 1.22 | 31 | 270 | 7 1/2 | 0.54 |
| T343AH100 | 1 | 25 | 1.50 | 38 | 270 | 10 | 0.66 |

REFER TO STEAM HOSE SAFETY FACTS ON PAGE 24.

COUPLING SUGGESTIONS

Steel or malleable iron male insert NPT or female ground joint or washer type with spuds attached with 2 or 4 bolt interlocking clamps.

- ★ Kuriyama offers a full line of ground joint couplings and clamps. Refer to current Kuriyama-Couplings™ and Accessories Catalog for type and pricing.
- ★ Universal quick-acting couplings should not be used with steam hose.

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Care, Maintenance & Storage

(Reprinted from RMA Hose Handbook 1 P-2 - Fourth Edition)

Hose has a limited life and the user must be alert to signs of impending failure, particularly when the conditions of service include high working pressures and/or the conveyance or containment of hazardous materials,

GENERAL CARE AND MAINTENANCE OF HOSE

Hose should not be subjected to any form of abuse in service. It should be handled with reasonable care. Hoses should not be dragged over sharp or abrasive surfaces unless specifically designed for such service. Care should be taken to protect hose from severe end loads for which the hose or hose assembly were not designed. Hose should be used at or below its rated working pressure; any changes in pressure should be made gradually so as to not subject the hose to excessive surge pressures. Hose should not be kinked or be run over by equipment. In handling large size hose, dollies should be used whenever possible; slings or handling rigs, properly placed, should be used to support heavy hose used in oil suction and discharge service.

STORAGE

Rubber hose products in storage can be affected adversely by temperature, humidity, ozone, sunlight, oils, solvents, corrosive liquids and fumes, insects, rodents and radioactive materials.

The appropriate method for storing hose depends to a great extent on its size (diameter and length), the quantity to be stored, and the way in which it is packaged. Hose should not be piled or stacked to such an extent that the weight of the stack creates distortions on the lengths stored at the bottom. Since hose products vary considerably in size, weight, and length, it is not practical to establish definite recommendations on this point. Hose having a very light wall will not support as much load as could a hose having a heavier wall or hose having a wire reinforcement. Hose which is shipped in coils or bales should be stored so that the coils are in a horizontal plane.

Whenever feasible, rubber hose products should be stored in their original shipping containers, especially when such containers are wooden crates or cardboard cartons which provide some protection against the deteriorating effects of oils, solvents, and corrosive liquids; shipping containers also afford some protection against ozone and sunlight.

Certain rodents and insects will damage rubber hose products, and adequate protection from them should be provided.

The ideal temperature for the storage of rubber products ranges from 50° to 70°F (10-20°C) with a maximum limit of 100°F (38°C). If stored below 32°F (0°C), some rubber products become stiff and would require warming before being placed in service. Rubber products should not be stored near sources of heat, such as radiators, base heaters, etc., nor should they be stored under conditions of high or low humidity.

To avoid the adverse effects of high ozone concentration, rubber hose products should not be stored near electrical equipment that may generate ozone or be stored for any lengthy period in geographical areas of known high ozone concentration. Exposure to direct or reflected sunlight – even through windows – should also be avoided. Uncovered hose should not be stored under fluorescent or mercury lamps which generate light waves harmful to rubber.

Storage areas should be relatively cool and dark, and free of dampness and mildew. Items should be stored on a first-in, first-out basis, since even under the best conditions, an unusually long shelf life could deteriorate certain rubber products.

Flexibility & Bend Radius

Flexibility and minimum bend radius are important factors in hose design and selection if it is known that the hose will be subjected to sharp curvatures in normal use. When bent at too sharp an angle, hose may kink or flatten in the cross-section. The reinforcement may also be unduly stressed or distorted and the hose life thereby shortened.

Adequate flexibility means the hose should be able to conform to the smallest anticipated bend radius without over stress. The minimum bend radius is generally specified for each hose in this catalog. This is the radius to which the hose can be bent in service without damage or appreciably shortening its life. The radius is measured to the inside of the curvature.

Formula to determine minimum hose length given bend radius and degree of bend required:

$$L = \frac{A}{360^\circ} \times 2\pi B$$

Where:

L = Minimum length of hose to make bend (Bend must be made equally along this portion of hose length).

A = Angle of bend

B = Given bend radius of hose

$\pi = 3.14$

Example: To make a 60° bend at the hoses's rated minimum bend radius of 15 cm:

$$L = \frac{60}{360^\circ} \times 2 \times 3.14 \times 15 \cong 16 \text{ cm}$$

Thus, the bend must be made over approximately 16 cm of hose length. The bend radius used must be equal to or greater than the rated minimum bend radius. Bending the hose to a smaller bend radius than minimum may kink the hose and the result in damage and early failure.

Oil Resistance

The definition of Oil Resistance is currently related to Tensile Retention % and Volume Swell % of the tested material after immersion in ASTM No. 3 Oil and in ASTM Fuel B for 70 hours at 100°C (212°F). The hose industry is currently classifying the materials as follows:

| Material Classification | | Tensile Retention | Volume Swell |
|-------------------------|-------------------------------|--------------------------------|---------------------------------|
| Maximum Oil Resistance | ASTM No. 3 Oil ASTM Fuel B | 80% Min. 50% Min. | 25% Max. 35% Max. |
| Medium Oil Resistance | ASTM No. 3 Oil ASTM Fuel B | 40% Min. 35% Min. | 100% Max. 60% Max. |
| None Oil Resistance | ASTM No. 3 Oil ASTM Fuel B | Less Than 40% Less Than 35% | More Than 100% More Than 80% |

Safety Features

Air hose – 4:1 Safety factor. Burst vs Working pressure

Water hose – 3:1 Safety factor. Burst vs Working pressure

Steam hose – 10:1 Safety factor. Burst vs Working pressure

Chemical Guide



The Chemical Guides in this section are offered as a general indication of the compatibility of the various materials used in ALFAGOMMA® hose with the chemicals and fluids listed. The basis for the ratings in this guide include actual service experience, the advice of various polymer suppliers, and the considered opinion of our rubber chemists. When in doubt, a sample of the compound should always be tested with the particular chemical it is to handle. Some of the variables that come into play in the resistance of a compound to chemical attack are:

1. Temperature of the Material Transmitted:

Higher temperatures increase the effect of chemicals on rubber compounds. The increase varies with the polymer and the chemical. A compound quite suitable at room temperature might fail very quickly at higher temperatures.

2. Service Conditions:

A rubber compound usually swells when exposed to a chemical. With a given percent of swell, the hose tube may function satisfactorily if the hose is in a static condition, but fail quickly if the hose is subject to flexing.

3. The Grade or Blend of the Rubber Compound:

Basic rubber polymers are sometimes mixed or blended together to enhance a particular property for a specific service. The reaction to a particular chemical blend of polymers may, therefore, be somewhat different from the reaction to the single ones. When in doubt, a sample of the compound should always be tested with the particular chemical it is to handle.

4. Alfagomma® hoses are produced using silicone free release agents.

KEY TO GENERAL CHEMICAL RESISTANCE CHART

Note: All data based on 20°C (68°F) unless otherwise noted.

Blank = No Data G = Good C = Conditional X = Unsatisfactory
 E = Excellent F = Fair I = Insufficient Data

GENERAL CHEMICAL RESISTANCE OF ALFAGOMMA® HOSE COMPOUNDS

| ASTM Designation D1418-93 | Common Name | Composition | General Properties |
|---------------------------|---------------------------|--|---|
| CIIR | Chlorobutyl | Chloro-Isobutene-Isoprene | Excellent resistance to high heat steam. Very good weathering resistance, low permeability to air. Good physical properties. Poor resistance to petroleum-based fluids. |
| CR | Neoprene | Chloroprene | Excellent weathering resistance. Flame retarding. Good oil resistance. Good physical properties. |
| CSM | Hypalon® | Chloro-sulfonated polyethylene | Excellent ozone, weathering and acid resistance. Good abrasion and heat resistance. Can be compounded for good oil resistance. |
| EPDM | EPM or EPDM | Ethylene-propylene-diene-terpolymer | Good general purpose polymer. Excellent heat, ozone and weather resistance. Not oil resistant. |
| NBR | BUNA-N or Nitrile | Nitrile-Butadiene | Excellent oil resistance. Good physical properties. |
| NR | Natural | Isoprene Rubber (Natural) | Excellent physical properties, including abrasion resistance. Not oil resistant. |
| SBR | SBR | Styrene-Butadiene Rubber | Good physical properties, including abrasion resistance. Not oil resistant. |
| UHMWPE | UHMWPE | Ultra-High Molecular Weight Polyethylene | Excellent resistance to a majority of existing chemicals. Meets FDA requirements for food and beverages. |
| XLPE | Cross Linked Polyethylene | Cross Linked Polyethylene | Excellent resistance to most solvents, oils and chemicals. Do not confuse with chemical properties of standard polyethylene. |
| | Synthetic Rubber | Synthetic Rubber | Black conductive synthetic rubber, excellent resistance to Biofuel based fluids. |

FOR APPLICATIONS INVOLVING INDUSTRIAL ACID CHEMICALS AND ALCOHOLS, PLEASE REFER TO T5050G AND T5090E CHEMICAL HOSES.

Chemical Resistance Chart

Key to General Chemical Resistance Chart [all data based on 20°C (68°F) unless noted]:

E – Excellent; G – Good; F – Fair; C – Conditional; I – Insufficient Data; X – Not Recommended; Blank – No Data

COMPOUND

| Chemical or Material Conveyed | CIIR | CR | CSM | EPDM | NBR | NR | SBR | XLPE | UHMWPE | T629AA |
|------------------------------------|------|----|-----|------|-----|----|-----|------|--------|--------|
| ACETALDEHYDE | E | C | F | E | X | F | X | E | E | X |
| ACETIC ACID, GLACIAL | G | F | C | G | X | C | X | E | E | X |
| ACETIC ACID, 10% | G | E | E | E | E | G | F | E | E | E |
| ACETIC ACID, 50% | G | F | E | E | F | X | F | E | E | F |
| ACETIC ANHYDRIDE | C | G | E | G | X | F | X | E | E | X |
| ACETIC OXIDE (Acetic anhydride) | G | G | E | G | X | F | X | E | E | X |
| ACETONE | E | C | X | E | X | C | C | E | E | X |
| ACETONE CYANOHYDRIN | E | G | F | E | X | F | | | | X |
| ACETONITRILE | E | E | G | E | X | G | | | | X |
| ACETOPHENONE | G | X | X | E | X | C | X | E | E | X |
| ACETYL ACETONE | E | X | X | E | X | X | X | | | X |
| ACETYL CHLORIDE | X | X | C | X | X | X | X | | | X |
| ACETYL OXIDE (Acetic anhydride) | G | G | E | G | X | F | | E | E | X |
| ACETYLENE | E | E | C | E | E | C | F | E | E | E |
| ACETYLENE DICHLORIDE | F | X | X | C | X | X | X | | | X |
| ACETYLENE TERACHLORIDE | X | C | X | C | X | X | | | | X |
| ACROLEIN | E | G | G | E | F | G | F | | | F |
| ACRYLONITRILE | X | X | C | E | X | C | F | E | E | X |
| ACRYLIC ACID | | X | G | X | X | X | | | | X |
| ADIPIC ACID | X | E | G | C | E | E | | E | E | E |
| AIR, +300°F | G | G | G | G | G | X | X | | | G |
| ALK-TRI | X | X | X | X | X | X | | | | X |
| ALLYL ALCOHOL | E | E | E | E | E | E | | E | E | E |
| ALLYL BROMIDE | X | X | X | X | X | X | | | | X |
| ALLYL CHLORIDE | C | X | X | X | G | X | E | E | F | G |
| ALUM (Aluminium potassium sulfate) | E | E | E | G | C | E | | E | E | C |
| ALUMINIUM ACETATE | G | C | F | E | C | E | X | | | C |
| ALUMINIUM CHLORIDE | E | E | E | E | E | E | E | E | E | E |
| ALUMINIUM FLUORIDE | E | E | E | E | E | E | E | E | E | E |
| ALUMINIUM FORMATE | G | E | X | E | X | X | | | | X |
| ALUMINIUM HYDROXIDE | E | E | E | E | E | E | G | E | E | E |
| ALUMINIUM NITRATE | E | E | E | E | E | E | E | | | E |
| ALUMINIUM SULFATE | A | G | E | E | E | E | G | E | E | E |
| ALUMUS-NH3-CR-K | | | | | | | | | | |
| AMINES-MIXED | | C | X | G | X | C | G | | | X |
| AMINO BENZENE (Aniline) | E | X | C | C | X | X | X | E | E | X |
| AMINODIMETHILBENZENE | G | X | F | C | C | X | | | | C |
| AMINOETHANE (Ethylamine) | G | C | F | E | C | C | X | E | E | C |
| AMINOXYLENE | G | X | X | E | C | X | | | | C |
| AMMONIUM CARBONATE | E | E | C | E | C | E | E | | | C |
| AMMONIUM CHLORIDE | E | E | E | E | G | E | E | E | E | G |
| AMMONIUM HYDROXIDE | G | E | E | E | C | G | X | E | E | C |
| AMMONIUM NITRATE | E | E | E | E | E | E | E | E | E | E |
| AMMONIUM PHOSPHATE, DIBASIC | E | E | E | E | E | E | E | E | E | E |
| AMMONIUM SULFATE | E | E | E | E | E | E | G | E | E | E |
| AMMONIUM SULFIDE | E | E | E | E | C | E | G | E | E | C |
| AMMONIUM THIOSULFATE | E | E | E | E | C | E | | | | C |
| AMYL ACETATE | G | X | X | C | X | C | X | E | E | X |
| AMYL ACETONE | G | X | X | G | X | X | | | | X |
| AMYL ALCOHOL | E | C | E | E | C | C | G | E | E | C |
| AMYL BROMIDE | X | X | X | C | X | X | | | | X |
| AMYL CHLORIDE | X | X | X | X | X | X | X | E | E | X |
| AMYL ETHER | X | X | F | X | C | X | | | | C |
| AMYLAMINE | G | C | F | X | F | F | | | | F |

COMPOUND

| Chemical or Material Conveyed | CIIR | CR | CSM | EPDM | NBR | NR | SBR | XLPE | UHMWPE | T629AA |
|-------------------------------|------|----|-----|------|-----|----|-----|------|--------|--------|
| ANETHOLE | X | X | X | X | X | X | | | | X |
| ANILINE | E | X | C | C | X | X | X | E | E | X |
| ANILINE DYES | G | C | G | C | X | C | G | E | E | X |
| ANILINE OIL | G | X | C | C | X | X | X | E | E | X |
| ANIMAL FATS | C | C | F | C | E | X | X | E | E | E |
| ANTIMONY PENTACHLORIDE | | C | X | C | X | X | | E | E | X |
| AQUA REGIA | C | X | C | C | X | X | X | X | X | X |
| ARGON | G | G | X | E | E | X | C | | | E |
| ARSENIC ACID | E | E | E | E | E | E | E | E | E | E |
| ASPHALT | X | C | F | X | C | X | X | E | E | C |
| ASTM FUEL A | X | C | C | X | E | X | X | | | E |
| ASTM FUEL B | X | X | X | X | C | X | X | | | C |
| ASTM FUEL C | X | X | X | X | C | X | X | | | C |
| ASTM OIL NO.1 | X | E | C | X | E | X | X | E | E | E |
| ASTM OIL NO.2 | X | C | X | X | E | X | X | E | E | E |
| ASTM OIL NO.3 | X | C | C | X | E | X | X | E | E | E |
| ASTM OIL NO.4 | X | X | X | X | C | X | X | | | C |
| AUTOMATIC TRASMISSION FLUID | X | C | C | X | E | X | X | | | E |
| BANANA OIL | C | X | C | C | X | X | | | | X |
| BARIUM CHLORIDE | E | E | E | E | E | E | E | E | E | E |
| BARIUM HYDROXIDE | E | E | E | E | E | E | E | E | E | E |
| BARIUM SULPHIDE | E | E | E | E | E | E | G | E | E | E |
| BEER | E | E | E | E | E | E | E | E | E | E |
| BEET SUGAR LIQUORS | E | C | E | E | E | E | E | E | E | E |
| BENZAL CHLORIDE | G | | | | X | | | | | X |
| BENZALDEHYDE | G | X | X | E | X | X | X | E | E | X |
| BENZENE | X | C | C | C | X | X | X | E | F | X |
| BENZENE CARBOXYLIC ACID | E | E | C | C | X | X | | | | X |
| BENZENE (Gasoline) | X | C | C | X | E | | X | E | E | E |
| BENZOIC ACID | C | E | C | C | X | X | X | | | X |
| BENZOL (Benzene) | X | C | C | C | X | X | X | E | F | X |
| BENZOTRICHLORIDE | | X | X | E | X | X | | | | X |
| BENZYL ACETATE | E | E | G | E | X | X | | | | X |
| BENZYL ALCOHOL | E | C | C | C | X | X | X | | | X |
| BENZYL CHLORIDE | X | X | X | X | X | X | X | | | X |
| BENZYL ETHER (Dibenzyl Ether) | G | X | X | C | X | X | X | | | X |
| BIODIESEL (BD100 O B100) | | | | | | | | | | E |
| BIODIESEL (BD20 O B20) | | | | | | | | | | E |
| BIOETHANOL (E85) | | | | | | | | | | E |
| BIS (2-CLOROETHYL) ETHER | | | | | | | | | | |
| BLACK SULFATE LIQUOR | G | G | G | G | G | G | G | E | E | G |
| BLEACH | E | C | E | E | X | C | X | G | F | X |
| BORAX SOLUTION | E | E | E | E | C | C | G | E | E | C |
| BORIC ACID | E | E | E | E | E | E | E | E | E | E |
| BRAKE FLUID (HD-557)12 DAYS | E | C | C | E | C | X | E | | | C |
| BRINE | E | E | E | E | E | E | | E | E | E |
| BROMACIL | | | | | | | | | | |
| BROMOBENZENE | X | X | X | X | X | X | X | | | X |
| BROMOCHLOROMETANE | C | X | X | G | X | X | | F | F | X |
| BROMOETHANE (Ethyl bromide) | C | X | X | X | C | C | X | E | E | C |
| BROMOTOLUENE | X | | X | | X | X | | | | X |
| BUGDIOXANE | | | | | | | | | | |
| BUNKER OIL | X | G | C | X | E | X | X | | | E |
| BUTADIENE | X | X | G | X | X | X | X | E | E | X |

FOR APPLICATIONS INVOLVING INDUSTRIAL ACID CHEMICALS AND ALCOHOLS, PLEASE REFER TO T5050G AND T5090E CHEMICAL HOSES.

Chemical Resistance Chart

Key to General Chemical Resistance Chart [all data based on 20°C (68°F) unless noted]:

E – Excellent; G – Good; F – Fair; C – Conditional; I – Insufficient Data; X – Not Recommended; Blank – No Data

COMPOUND

| Chemical or Material Conveyed | CIIR | CR | CSM | EPDM | NBR | NR | SBR | XLPE | UHMWPE | T629AA |
|-------------------------------------|------|----|-----|------|-----|----|-----|------|--------|--------|
| BUTANE | X | E | C | X | E | X | X | E | E | E |
| BUTANOIC ACID | X | X | C | C | C | C | | | | C |
| BUTANOL (Butyl alcohol) | C | E | E | C | E | E | E | E | E | E |
| BUTANONE | E | X | X | E | X | X | X | E | E | X |
| BUTOXYETHANOL | C | X | G | E | C | X | | | | C |
| BUTYL ACETATE | C | X | X | C | X | X | X | E | E | X |
| BUTYL ACRYLATE | X | X | X | C | X | X | X | E | E | X |
| BUTYL ALCOHOL | C | E | E | C | E | E | E | E | E | E |
| BUTYL ALDEHYDE (Butyraldehyde) | C | X | X | C | X | X | X | E | E | X |
| BUTYL BENZYL PHTHALATE | E | E | X | E | X | X | | E | E | X |
| BUTYL CARBITOL | E | X | C | E | X | X | X | | | X |
| BUTYL CELLOSOLVE | C | X | G | C | C | X | X | E | E | C |
| BUTYL CHLORIDE | F | X | X | X | X | X | | | | X |
| BUTYL ETHER | C | C | X | C | X | X | X | E | E | X |
| BUTYL ETHER ACETALDEHYDE | G | X | X | X | X | X | | | | X |
| BUTYL ETHYL ETHER | X | X | C | F | G | X | | | | G |
| BUTYL OLEATE | C | X | X | C | X | X | X | | | X |
| BUTYL PHTHALATE | G | X | X | E | X | X | X | E | E | X |
| BUTYL STEARATE | C | X | X | X | C | X | X | E | E | C |
| BUTYLENE | X | C | C | X | C | X | X | | | C |
| BUTYRALDEHYDE | C | X | X | C | X | X | X | E | E | X |
| BUTYRIC ACID | X | X | C | C | C | C | X | E | E | C |
| BUTYRIC ANHYDRIDE | F | G | G | E | C | F | | | | C |
| CADMIUM ACETATE | E | | E | | X | X | | | | X |
| CALCIUM ALUMINATE | E | | E | | E | E | | | | E |
| CALCIUM BICHROMATE | E | E | F | E | C | | | | | C |
| CALCIUM BISULFIDE | X | E | F | E | C | X | G | | | C |
| CALCIUM CHLORIDE | E | E | E | E | E | E | E | E | E | E |
| CALCIUM HYDROXIDE | E | E | E | E | E | E | E | E | E | E |
| CALCIUM HYPOCHLORITE | E | C | E | E | C | C | X | E | E | C |
| CALCIUM NITRATE | E | E | E | E | E | E | E | | | E |
| CALCIUM SULFIDE | E | E | E | E | E | C | X | | | E |
| CALCIUM ACETATE | E | C | C | E | C | E | X | | | C |
| CAPRYLIC ACID | F | | G | | F | C | | | | F |
| CARBAMIDE (Urea) | E | G | E | E | G | E | | E | E | G |
| CARBITOL | C | C | C | C | C | C | E | E | E | C |
| CARBOLIC ACID PHENOL | C | | C | | | C | | | | |
| CARBON DIOXIDE | E | G | E | G | E | G | G | E | E | E |
| CARBON DISULFIDE (Carbon bisulfide) | X | X | X | X | X | X | | C | C | X |
| CARBON MONOXIDE | E | C | C | E | E | C | G | E | E | E |
| CARBON TETRACHLORIDE | X | X | X | X | X | X | | E | E | X |
| CARBONIC ACID | E | E | E | E | C | E | G | E | E | C |
| CASTOR OIL | C | E | E | C | E | E | E | E | E | E |
| CAUSTIC SODA | E | G | E | G | C | E | E | E | E | C |
| CELLOSOLVE ACETATE | C | X | X | G | X | C | X | E | E | X |
| CELLUGUARD | E | E | E | E | E | E | E | | | E |
| CETYLIC ACID (Palmitic acid) | C | G | C | C | E | C | G | E | E | E |
| CHINA WOOD OIL (Tung oil) | C | C | C | X | E | X | X | E | E | E |
| CHLORINATED SOLVENTS | X | X | X | X | X | X | X | E | E | X |
| CHLORO-2-PROPANONE | C | | X | | | X | | | | |
| CHLOROACETIC ACID | C | X | G | C | X | X | X | E | E | X |
| CHLOROACETONE | C | X | X | E | X | X | X | E | E | X |
| CHLOROBENZENE | X | X | X | X | X | X | X | E | E | X |
| CHLOROBUTANE | F | X | X | X | X | X | | | | X |

COMPOUND

| Chemical or Material Conveyed | CIIR | CR | CSM | EPDM | NBR | NR | SBR | XLPE | UHMWPE | T629AA |
|--------------------------------------|------|----|-----|------|-----|----|-----|------|--------|--------|
| CHLORODANE (Chlordane) | X | C | C | X | C | X | X | | | C |
| CHLOROETHYL BENZENE | X | X | X | X | C | X | | | | C |
| CHLOROFORM | X | X | X | X | X | X | X | F | F | X |
| CHLOROPENTANE | X | X | X | X | X | X | | | | X |
| CHLOROSULFONIC ACID | X | X | X | X | X | X | X | F | X | X |
| CHLOROTOLUENE | X | X | X | X | X | X | X | | | X |
| CHLOROXY | C | C | C | G | C | X | X | | | C |
| CHROME PLATING SOLUTIONS | C | X | X | C | X | X | X | | | X |
| CHROMIC ACID | C | X | E | C | X | C | X | E | E | X |
| CHROMIUM TRIOXIDE (Chromic oxide) | G | X | E | C | X | X | X | | | X |
| CINNAMENE (Vinylbenzene) | X | X | X | X | C | X | X | | | C |
| CIS-9-OCTADECENOIC ACID (Oleic acid) | X | C | C | C | G | X | X | E | E | G |
| CITRIC ACID | E | E | E | E | E | E | E | E | E | E |
| COAL TAR OIL (Coal oil) | X | G | F | X | E | X | X | E | E | E |
| COAL TAR | X | C | C | X | C | X | X | E | E | C |
| COAL TAR NAPHTHA | X | X | X | X | X | X | | E | E | X |
| COCONUT OIL | C | C | C | C | E | X | X | E | E | E |
| COKE OVEN GAS | C | X | C | X | X | C | X | E | E | X |
| COOLANOL (Monsanto) | X | C | C | X | E | X | X | | | E |
| COPPER CHLORIDE | E | C | C | E | E | E | E | E | E | E |
| COPPER CYANIDE | E | E | E | E | E | E | E | E | E | E |
| COPPER HYDRATE | E | | G | | G | F | | | | G |
| COPPER HYDROXIDE (Copper hydrate) | E | | G | | G | F | | | | G |
| COPPER SULFATE | C | E | E | E | E | C | G | E | E | E |
| CORN OIL | C | C | C | C | E | X | X | E | E | E |
| COTTONSEED OIL | C | C | C | C | E | X | X | E | E | E |
| CREOSOTE | X | C | X | X | C | X | X | E | E | C |
| CRESOLS | X | X | X | X | X | X | X | E | E | X |
| CRESYLIC ACID | X | X | X | X | X | X | X | E | E | X |
| CROTONALDEHYDE | E | X | X | E | X | X | F | E | E | X |
| CRUDE OIL | X | C | C | X | C | X | X | E | E | C |
| CUMENE | X | X | X | X | X | X | X | | | X |
| CUPRIC CARBONATE | | | | | | | | | | |
| CUPRIC HYDROXIDE (Copper hydroxide) | E | | G | | G | F | | | | G |
| CUPRIC NITRATE (Copper nitrate) | E | E | E | C | C | G | | E | E | C |
| CUPRIC SULFATE (Copper sulfate) | C | E | E | E | E | C | G | E | E | E |
| CUTTING OIL | X | C | C | X | E | C | X | | | E |
| CYCLOHEXANE | X | X | C | X | E | X | X | E | E | E |
| CYCLOHEXANOL | X | C | C | X | G | C | X | E | E | G |
| CYCLOHEXANONE | C | X | X | C | X | X | X | E | E | X |
| CYCLOPENTANE | X | C | X | X | G | X | | | | G |
| CYCLOPENTANOL | | | | | | | | | | |
| CYCLOPENTANONE | X | | X | | X | X | | | | X |
| CYCLOPENTYL ALCOHOL (Cyclopentanol) | | F | | C | X | | | | | X |
| D-FURALDEHYDE (Furfural) | C | F | C | E | G | X | | | | G |
| DDT IN KEROSENE | X | C | C | X | E | X | X | | | E |
| DECAHYDRONAPHTHALENE (Decalin) | X | X | X | X | X | X | E | E | E | X |
| DECAHYDROXYNAPHTHALENE | | | | | | | | | | |
| DECALIN | X | X | X | X | X | X | E | E | E | X |
| DECYL ALCOHOL (Decanol) | X | X | C | X | E | X | | | | E |
| DECYL ALDEHYDE | F | | X | X | X | X | | | | X |
| DECYL BUTYL PHTHALATE | E | | X | | X | X | | | | X |
| DECIL CARBINOL | | | | | | | | | | |
| DETERGENT, WATER SOLUTION | E | C | C | E | E | E | G | E | E | E |

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ALFAGOMMA® Chemical Resistance Chart

Key to General Chemical Resistance Chart [all data based on 20°C (68°F) unless noted]:

E – Excellent; G – Good; F – Fair; C – Conditional; I – Insufficient Data; X – Not Recommended; Blank – No Data

COMPOUND

| Chemical or Material Conveyed | CIIR | CR | CSM | EPDM | NBR | NR | SBR | XLPE | UHMWPE | T629AA |
|--|------|----|-----|------|-----|----|-----|------|--------|--------|
| DEVELOPING FLUID (PHOTO) | C | E | E | C | E | E | G | | | E |
| DEXTRON | X | C | X | X | E | X | X | | | E |
| DI (2ETHYLHEXYL) ADIPATE (Diethyl adipate) | E | X | X | G | X | X | | G | G | X |
| DI (2ETHYLHEXYL) PHTHALATE (Diethyl phthalate) | C | X | X | C | X | X | X | E | E | X |
| DI-ISO-BUTYLENE | X | C | X | X | C | X | X | E | | C |
| DI-ISO-DECYL PHTHALATE | E | X | X | E | X | X | | | | X |
| DI-ISO-PROPANOLAMINE | E | G | F | E | G | G | | | | G |
| DI-ISO-PROPYL ETHER | X | C | C | X | G | X | | E | E | G |
| DI-ISO-PROPYL KETONE | E | X | X | E | X | X | X | E | | X |
| DI-P-MENTHA-1,8-DIENE (Cinene) | X | X | X | X | C | X | | | | C |
| DIACETONE ALCOHOL | E | F | C | E | X | X | X | E | E | X |
| DIACETYL METHANE (Acetylacetone) | E | X | X | E | X | | X | | | X |
| DIALLYL PHTHALATE (Diallyl phthalate) | | | | | | | | | | |
| DIAMMONIUM ORTHOPHOSPHATE | | E | | E | E | | | | | E |
| DIAMYL NAPHTHALENE | E | | X | | | X | | E | E | |
| DIAMYLAMINE | E | C | C | E | G | G | X | | | G |
| DIAMYLENE | X | X | X | X | | X | | | | |
| DIAMYLPHENOL | X | | X | | X | X | | E | E | X |
| DIBENZYL ETHER | C | X | X | C | X | X | X | | | X |
| DIBROMOBENZENE | X | X | X | X | X | X | | | | X |
| DIBROMOMETHANE (Methylene bromide) | X | X | X | C | X | X | | | | X |
| DIBUTYL ETHER | C | C | X | C | X | X | X | E | E | X |
| DIBUTYL PHTHALATE | C | X | X | C | X | X | X | E | E | X |
| DIBUTYL SEBACATE | C | X | X | C | X | X | X | E | E | X |
| DIBUTYLAMINE | X | C | C | F | X | X | X | | | X |
| DICALCIUM PHOSPHATE | E | E | E | E | E | E | | | | E |
| DICHLOROETHYLENE (1,2-Dichloroethene) | C | X | X | C | X | X | | F | F | X |
| DICHLOROACETIC ACID | C | X | X | X | X | X | X | E | E | X |
| DICHLOROBENZENE | X | X | X | X | X | X | X | | | X |
| DICHLOROBUTANE | X | X | X | X | C | X | X | | | C |
| DICHLORODIFLUOROMETHANE | C | C | C | C | C | C | E | E | G | C |
| DICHLOROETHANE | C | X | X | X | X | X | X | E | E | X |
| DICHLOROETHYL ETHER | X | X | X | X | X | X | | | | X |
| DICHLOROHXANE | X | X | X | X | X | X | | | | X |
| DICHLOROMETHANE | X | X | X | X | X | X | X | | | X |
| DICHLOROPENTANE | X | X | X | X | X | X | X | | | X |
| DICHLOROPROPANE | X | X | X | X | F | X | | G | G | F |
| DICHLOROPROPENE | X | X | X | X | C | X | | G | G | C |
| DICHLOROTOLUENE | | | | | | | | | | |
| DIESEL OIL | X | C | C | X | E | X | X | E | E | E |
| DIETHANOL AMINE | E | G | F | G | C | G | X | | | C |
| DIETHYLBENZENE | X | | X | | | X | X | | | |
| DIETHYL ETHER | X | X | X | X | X | X | X | E | E | X |
| DIETHYL KETONE | G | X | X | G | X | X | | E | E | X |
| DIETHYL OXALATE | X | X | X | X | X | F | | | | X |
| DIETHYL PHTHALATE | X | X | X | F | X | X | | E | E | X |
| DIETHYL SEBACATE | G | X | F | F | C | X | X | | | C |
| DIETHYL SULFATE | C | E | X | E | X | X | E | | | X |
| DIETHYL AMINE | C | C | C | C | C | C | G | E | E | C |
| DIETHYLENE GLYCOL | E | E | E | E | E | E | E | E | E | E |
| DIETHYLENE OXIDE | X | X | X | E | X | X | | | | X |
| DIETHYLENTRIAMINE | E | X | F | E | G | G | X | | | G |

COMPOUND

| Chemical or Material Conveyed | CIIR | CR | CSM | EPDM | NBR | NR | SBR | XLPE | UHMWPE | T629AA |
|--|------|----|-----|------|-----|----|-----|------|--------|--------|
| DIETHYLTRIAMINE | | | | | | | | | | |
| DIHYDROXY SUCCINIC ACID | G | G | E | G | G | E | | | | G |
| DIHYDROXYDIETHYL ETHER (Diethylene glycol) | E | E | E | E | E | E | | E | E | E |
| DIISOBUTYL KETONE | G | X | X | E | X | X | X | E | E | X |
| DIISODECYL PHTHALATE | E | X | X | E | X | X | | E | E | X |
| DIISOCTYL ADIPATE | E | X | X | E | X | X | | | | X |
| DIISOCTYL PHTHALATE | E | X | X | G | X | X | | E | E | X |
| DIMETHYL CARBINOL | E | G | E | E | C | E | | E | E | C |
| DIMETHYL KETONE | E | C | X | E | X | C | F | E | E | X |
| DIMETHYL PHTHALATE | C | X | X | C | X | X | X | E | E | X |
| DIMETHYL SULFATE | G | X | X | X | X | X | | E | E | X |
| DIMETHYL SULFIDE | F | X | X | X | X | X | | | | X |
| DIMETHYL-3-PENTANONE | | | | | | | | | | |
| DIMETHYL-4-HEPTANONE | | | | | | | | | | |
| DIMETHYLAMINE | G | X | X | E | F | G | X | E | E | F |
| DIMETHYLANILINE | G | X | X | E | X | X | X | | | X |
| DIMETHYLBENZENE | X | X | X | X | X | X | X | | | X |
| DIMETHYLBUTANE (iso-Pentane) | X | | X | | | X | | | | |
| DIETHYL ADIPATE | E | X | X | G | X | X | | | | X |
| DIETHYL PHTHALATE | C | X | X | C | X | X | X | E | E | X |
| DIOXALANE | | | | | | | | X | | |
| DIOXANE | C | X | X | C | X | X | X | E | E | X |
| DIPENTENE | X | X | X | X | C | X | X | | | C |
| DIPENTYLAMINE (Diamylamine) | E | C | C | E | G | G | X | | | G |
| DIPROPYLAMINEOLAMINE | | | | | | | | | | |
| DIPROPYLENE GLYCOL | E | E | E | E | E | E | | | | E |
| DISODIUM PHOSPHATE | E | E | E | E | E | E | | | | E |
| DIVINYLBENZENE | X | X | X | X | X | X | X | | | X |
| DOWELL INHIBITOR | | | | | | | | | | |
| DOWFAX 2A1 SOLVENT | | | | | | | | | | |
| DOWFAX 2A1 TA | | | | | | | | | | |
| DOWFAX 6A1 SOLVENT | | | | | | | | | | |
| DOWFAX 6A1 TA | | | | | | | | | | |
| DOWTHERM, A AND E | X | X | C | X | X | X | X | | | X |
| DRY CLEANING FLUIDS | X | X | X | X | C | X | X | | | C |
| DUCGKIRIOEBAANE | | | | | | | | | | |
| DURD AW-16,31 | | | | | | | | | | |
| DURO FR-HD | | | | | | | | | | |
| ETHANOIC ACID (Acetic acid) | | | C | C | C | | G | E | E | C |
| ETHANOL (Grain alcohol) | E | E | E | E | C | E | E | E | E | E |
| ETHANOLAMINE | C | C | C | E | C | C | X | | | C |
| ETHERS | X | X | X | X | F | X | X | E | E | F |
| ETHYL ACETATE | C | X | X | C | X | X | X | E | E | X |
| ETHYL ACETOACETATE | C | X | X | C | X | C | F | | | X |
| ETHYL ACETONE (2-Pentanone) | G | X | X | G | X | X | | | | X |
| ETHYL ACRYLATE | C | X | X | C | X | X | X | | | X |
| ETHYL ALCOHOL | E | E | E | E | C | E | E | E | E | E |
| ETHYL ALDEHYDE | E | X | F | E | X | C | | E | E | X |
| ETHYL ALUMINIUM DICHLORIDE | X | | X | | X | X | | | | X |
| ETHYL BENZENE | X | X | X | X | X | X | X | E | E | X |
| ETHYL BROMIDE | X | X | X | X | C | C | X | E | E | C |
| ETHYL BUTYL ACETATE | E | | G | | X | X | | | | X |
| ETHYL BUTYL ALCOHOL (Ethylbutanol) | E | | E | | | | | E | | |

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|---|------|----|-----|------|-----|----|-----|------|--------|--------|
| ETHYL CELLULOSE | C | C | C | C | C | C | G | E | E | C |
| ETHYL CHLORIDE | E | X | C | C | E | C | G | E | E | E |
| ETHYL DICHLORIDE | F | X | X | X | X | X | X | E | E | X |
| ETHYL DIISOBUTYLTHIO-CABARMATE | | | | | | | | | | |
| ETHYL ETHER | X | X | X | X | X | X | X | E | E | X |
| ETHYL FORMATE | C | C | C | C | X | X | X | | | X |
| ETHYL IODIDE | F | X | X | F | X | X | | E | E | X |
| ETHYL OXALATE | X | X | X | E | X | E | X | | | X |
| ETHYL PHTHALATE | X | X | X | F | X | X | | E | E | X |
| ETHYL SILICATE | E | E | C | E | E | C | G | | | E |
| ETHYL-N-BUTYL KETONE | G | X | X | G | X | X | | | | X |
| ETHYL-1-BUTANOL | E | E | E | E | E | E | | | | E |
| ETHYLAMINE | C | C | F | E | C | C | X | | | C |
| ETHYLENE CHLOROHYDRIN | C | C | C | C | X | C | G | | | X |
| ETHYLENE DIAMINE | E | E | C | E | C | C | G | E | E | C |
| ETHYLENE DIBROMIDE | C | X | X | C | X | X | X | F | F | X |
| ETHYLENE DICHLORIDE | C | X | X | X | X | X | X | F | F | X |
| ETHYLENE GLYCOL MONOETHYL ACETATE | | | | | | | | | | |
| ETHYLENE GLYCOL MONOBUTYL ETHER | E | X | C | E | F | X | X | E | E | F |
| ETHYLENE GLYCOL MONOETHYL ETHER (Ethoxyethanol) | C | X | X | C | C | X | | E | E | C |
| ETHYLENE GLYCOL MONOHEXIL ETHER | | | | | | | | | | |
| ETHYLENE GLYCOL | E | E | E | E | E | E | E | E | E | E |
| ETHYLENE OXIDE | C | X | X | C | X | X | X | E | E | X |
| FATTY ACIDS | C | C | C | X | C | X | X | E | G | C |
| FERRIC BROMIDE | E | | E | | E | E | | | | E |
| FERRIC CHLORIDE | E | C | C | E | E | E | E | | E | E |
| FERRIC NITRATE | E | E | E | E | E | E | E | | E | E |
| FERRIC SULFATE | E | E | E | E | E | E | E | | E | E |
| FERROUS ACETATE | E | X | E | G | X | X | | | | X |
| FERROUS CHLORIDE | E | E | E | E | E | E | | | E | E |
| FERROUS SULFATE | E | E | E | E | E | E | E | | E | E |
| FLUOROBORIC ACID | C | E | E | E | E | E | E | E | E | E |
| FLUORINE | X | X | X | E | X | X | | G | G | X |
| FLUROSILICIC ACID | E | E | E | E | E | E | G | E | E | E |
| FORMALDEHYDE | C | C | C | C | C | C | G | E | E | C |
| FORMALIN (Formaldehyde) | C | G | C | E | G | C | G | E | E | G |
| FORMIC ACID | E | C | E | E | C | C | E | E | E | C |
| FREON SO2 | | | | | | | | | | |
| FREON 113 | X | E | C | X | E | C | G | | | E |
| FREON 12 | X | C | E | C | C | X | E | F | G | C |
| FREON 22 | C | E | E | C | X | C | E | F | E | X |
| FUEL A (ASTM) | X | C | C | X | E | X | | | | E |
| FUEL B (ASTM) | X | X | X | X | C | X | | | | C |
| FUEL OIL | X | C | C | X | E | X | X | E | E | E |
| FURAN (Furfuran) | X | X | X | X | X | X | X | E | E | X |
| FURFURAL | C | X | C | C | X | X | X | E | E | X |
| FURFURAN (Furan) | X | X | X | X | X | X | X | E | E | X |
| FURFURYL ALCOHOL | C | X | X | C | X | X | X | E | E | X |
| GALLIC ACID | C | C | C | C | C | E | G | E | E | C |
| GALLOTANNIC ACID | G | E | E | E | | E | | | | |
| GAS, COAL | | | | | | | | | | |
| GAS, HIGH OCTANE | | | | | | | | | | |
| GASOLINE | C | X | C | X | E | C | X | E | E | E |

COMPOUND

| Chemical or Material Conveyed | CIIR | CR | CSM | EPDM | NBR | NR | SBR | XLPE | UHMWPE | T629AA |
|--|------|----|-----|------|-----|----|-----|------|--------|--------|
| GLACIAL ACRYLIC ACID (Acrylic acid) | X | X | G | X | X | X | | | | X |
| GLUCONIC ACID | F | E | G | E | C | X | | | | C |
| GLUCOSE | E | C | E | E | E | E | E | E | E | E |
| GLYCERINE | E | E | E | E | E | E | E | E | E | E |
| GLYCEROL | E | E | E | E | E | E | E | E | E | E |
| GLYCOGENIC ACID (Gluconic acid) | F | E | G | E | F | X | | | | F |
| GLYCOLS | E | E | E | E | E | E | E | E | E | E |
| GLYCONIC ACID (Gluconic acid) | F | E | G | E | F | X | | | | F |
| GLYCLYL ALCOHOL | | | | | | | | | | |
| GREASE | X | F | C | X | E | X | X | | | E |
| GREEN SULPHATE LIQUOR | E | C | G | E | C | C | G | | | C |
| HALON 1211 | | | | | | | | | | |
| HELIUM | E | E | E | E | E | E | E | | | E |
| HEPTALDEHYDE | C | C | X | C | E | X | X | | | E |
| HEPTANAL | C | C | X | C | E | X | X | | | E |
| HEPTANE | X | C | C | X | E | X | X | | | E |
| HEPTANE CARBOXYLIC ACID | | | | | | | | | | |
| HEPTANOIC ACID | X | C | C | X | E | X | | | | E |
| HEPTANONE | | | | | | | | | | |
| HEXADECANOIC ACID | G | X | X | G | E | E | G | E | E | E |
| HEXALDEHYDE | C | C | C | C | X | X | X | E | E | X |
| HEXANE | X | C | C | X | E | X | X | E | E | E |
| HEXANOL | C | C | C | C | C | E | E | E | E | C |
| HEXENE | X | C | C | X | C | X | X | | | C |
| HEXYL ALCOHOL | C | C | C | C | C | E | E | E | E | C |
| HEXYL METHYL KETONE (Methyl hexyl ketone) | G | C | X | G | X | X | | | | X |
| HEXYLAMINE | G | G | F | G | F | F | | | | F |
| HEXYLENE GLYCOL | E | E | E | F | C | E | | | | C |
| HISTOWAX (Paraffin Wax) | X | | C | | | X | | | | |
| HYDRAULIC & MOTOR OIL | C | C | C | C | C | X | X | E | E | C |
| HYDRAZINE | C | C | C | E | C | C | G | | | C |
| HYDROBROMIC ACID | E | C | E | E | X | E | X | E | E | X |
| HYDROCHLORIC ACID | C | C | C | C | C | C | X | C | C | C |
| HYDROCYANIC ACID | C | C | E | E | C | C | G | | | C |
| HYDROFLUORIC ACID | C | C | E | C | C | C | X | E | E | C |
| HYDROFLUOSILICIC ACID | E | C | E | E | X | E | G | E | E | X |
| HYDROGEN CHLORIDE ANHYDROUS | E | C | E | E | X | X | X | | | X |
| HYDROGEN DIOXIDE (10%) (Hydrogen peroxide) | G | F | C | G | F | G | | | | F |
| HYDROGEN GAS | E | E | E | E | E | C | G | E | E | E |
| HYDROGEN PEROXIDE OVER 10% | C | X | C | C | X | C | X | C | F | X |
| HYDROGEN PEROXIDE 10% | G | F | C | G | F | G | X | E | E | F |
| HYDROGEN SULFIDE (WET) | E | E | G | E | X | X | X | E | E | X |
| HYDROXY BENZENE (Phenol) | C | X | C | C | X | C | | | | X |
| HYDROXYISOBUTYRONIRILE (Acetone cyanohydrin) | E | G | F | E | C | C | | | | C |
| HYDROXYTOLUENE (Benzyl alcohol) | C | C | C | C | X | X | X | | | X |
| HYVAR VXL | | | | | | | | | | |
| IMINODI-2-PROPANOL (Diisopropanolamine) | E | G | F | E | G | G | | | | G |
| IMINODIETHANOL (Diethanolamine) | C | G | F | G | C | C | X | | | C |
| IODINE | C | C | C | C | C | X | G | E | E | C |
| IODINE PENTAFLUORIDE | X | X | X | X | X | X | X | | | X |

FOR APPLICATIONS INVOLVING INDUSTRIAL ACID CHEMICALS AND ALCOHOLS, PLEASE REFER TO T5050G AND T5090E CHEMICAL HOSES.

ALFAGOMMA® Chemical Resistance Chart

Key to General Chemical Resistance Chart [all data based on 20°C (68°F) unless noted]:

E – Excellent; G – Good; F – Fair; C – Conditional; I – Insufficient Data; X – Not Recommended; Blank – No Data

COMPOUND

| Chemical or Material Conveyed | CIIR | CR | CSM | EPDM | NBR | NR | SBR | XLPE | UHMWPE | T629AA |
|---|------|----|-----|------|-----|----|-----|------|--------|--------|
| IODOFORM | X | X | X | E | E | X | | | | E |
| ISO-BUTANAL (Isobutyraldehyde) | | F | | G | X | X | G | E | E | X |
| ISO-BUTYLAMINE | E | X | F | G | X | F | | | | X |
| ISO-BUTYLBROMIDE | X | X | X | X | X | X | | | | X |
| ISO-BUTYLCARBINOL (Isoamyl alcohol) | E | E | E | E | E | X | | | | E |
| ISOCYANATES | G | X | F | G | C | F | | E | E | C |
| ISOOCTANE | X | C | C | X | E | X | X | E | E | E |
| ISOPROPYL ACETATE | C | X | X | C | X | X | X | E | E | X |
| ISOPROPYL ALCOHOL | E | C | E | E | C | E | E | E | E | C |
| ISOPROPYL ETHER | X | X | C | X | G | X | X | E | E | G |
| JET FUELS | X | C | X | X | C | X | X | E | E | C |
| JP-4 OIL | X | X | X | X | E | X | X | | | E |
| KEROSENE | X | C | C | X | E | X | X | E | E | E |
| KETONES | G | C | C | E | C | C | E | E | E | C |
| LACQUER SOLVENTS | X | X | X | X | X | X | | E | E | X |
| LACTIC ACID - COLD | E | C | E | C | C | E | G | G | G | C |
| LACTIC ACID - HOT | E | C | E | C | C | E | X | G | G | C |
| LARD | C | C | C | C | E | X | X | E | E | E |
| LAVENDER OIL | X | X | X | X | C | X | X | | | C |
| LEAD ACETATE | E | C | X | E | C | E | X | E | E | C |
| LEAD NITRATE | E | E | E | E | E | E | E | | | E |
| LEAD SULFATE | E | E | E | E | E | E | | E | E | E |
| LIME | E | G | G | E | G | E | | E | E | G |
| LIME BLEACH (Calcium hypochlorite) | E | C | E | E | C | C | E | | | C |
| LIME SULFUR | E | E | E | E | E | C | X | E | E | E |
| LIMONENE (Dipentene) | X | X | X | X | C | X | | | | C |
| LINOLEIC ACID | X | C | X | X | C | X | X | | | C |
| LINSEED OIL | C | C | C | C | E | X | X | E | E | E |
| LIQUID PETROLEUM GAS (LPG) | X | G | C | X | E | X | X | E | E | E |
| LUBRICATING OIL | X | C | C | X | C | X | X | E | E | C |
| LYE SOLUTIONS (Caustic soda solution) | E | G | E | G | C | E | G | | | C |
| MEK | E | X | X | E | X | X | X | E | E | X |
| MAGNESIUM ACETATE | E | X | E | G | X | X | X | | | X |
| MAGNESIUM CHLORIDE | E | E | E | E | E | E | E | E | E | E |
| MAGNESIUM HYDRATE (Magnesium hydroxide) | E | C | E | E | C | C | G | E | E | C |
| MAGNESIUM HYDROXYDE | E | C | E | E | C | C | G | E | E | C |
| MAGNESIUM SULFATE | E | E | E | E | E | C | G | E | E | E |
| MALEIC ACID | X | X | X | C | X | X | X | E | E | X |
| MALEIC ANHYDRIDE | C | X | X | C | X | X | X | | | X |
| MALIC ACID | X | C | C | C | E | E | G | C | C | E |
| MANGANOUS SULFATE | G | E | E | E | E | G | | | | E |
| MAPP | | | | | | | | | | |
| MERCURY | E | E | E | E | E | E | E | E | E | E |
| MERCURY VAPORS | E | G | E | E | E | G | E | | | E |
| MESITYL OXIDE | F | X | X | C | X | X | X | | | X |
| METHALLYL ALCOHOL | E | E | E | E | E | E | | | | E |
| METHALLYL CHLORIDE | X | X | X | | | X | | | | |
| METHANE CARBOXYLIC ACID *see Acetic Acid | | | | | | | | E | E | |
| METHANOIC ACID (Formic acid) | E | E | E | E | G | C | E | E | E | G |
| METHANOL (Methyl alcohol) | C | E | E | E | C | E | E | E | E | C |
| METHANOL (Wood alcohol) | C | E | E | E | C | E | E | E | E | C |
| METHOXY ETHANOL | E | E | E | E | C | E | | E | E | C |

COMPOUND

| Chemical or Material Conveyed | CIIR | CR | CSM | EPDM | NBR | NR | SBR | XLPE | UHMWPE | T629AA |
|--|------|----|-----|------|-----|----|-----|------|--------|--------|
| METHOXYETHOXY ETHANOL | | | | | | | | | | |
| METHOXYPROPENYL BENZENE | | | | | | | | | | |
| METHYL ACETATE | C | C | X | C | X | C | X | | | X |
| METHYL ACETOACETATE | C | X | X | C | X | X | X | | | X |
| METHYL ACETONE (Ethyl methyl ketone) | E | X | X | E | X | X | X | E | E | X |
| METHYL ACETYLENE PROPADIENE | | | | | | | | | | |
| METHYL ALLYL ALCOHOL | | | | | | | | | | |
| METHYL ALLYL CHLORIDE (Methylallyl chloride) | X | X | X | | | X | | | | |
| METHYL AMYL CARBINOL (s-Heptyl alcohol) | G | G | E | E | E | G | | | | E |
| METHYL BENZENE (Toluene) | X | X | X | X | X | X | X | F | F | X |
| METHYL BROMIDE | C | X | X | X | C | X | X | F | F | C |
| METHYL BUTANE (iso-Pentane) | X | X | X | X | E | X | | | | E |
| METHYL BUTYL ALCOHOL | | | | | | | | | | |
| METHYL BUTYL KETONE | E | X | X | E | X | X | X | E | E | X |
| METHYL CARBITOL (Diethylene glycol monomethyl ether) | | F | | G | F | | | | | F |
| METHYL CELLOSOLVE | C | C | C | C | C | X | X | E | E | C |
| METHYL CHLORIDE | C | X | X | C | X | X | X | F | F | X |
| METHYL CYANIDE | E | E | G | E | C | G | | | | C |
| METHYL ETHYL KETONE | E | X | X | E | X | X | X | E | E | X |
| METHYL HEXANOL | E | E | E | E | E | E | | | | E |
| METHYL METHACRYLATE | X | X | X | X | X | X | X | E | E | X |
| METHYL NORMAL AMYL KETONE | | E | X | E | C | X | | | | C |
| METHYL PROPYL ETHER | X | X | C | X | X | X | | | | X |
| METHYL SALICYLATE | C | X | X | C | X | X | | E | E | X |
| METHYL STYRENE (p-Vinyltoluene) | X | X | X | X | X | X | | | | X |
| METHYL SULFIDE (Dimethyl sulfide) | F | X | X | X | X | X | | | | X |
| METHYL TERTIARY METHYL ETHER | | | | | | | | | | |
| METHYL 1-2, 4-PENTANEDIOL | | | | | | | | | | |
| METHYL-ISO-AMYL-KETONE | G | | X | | | X | | | | |
| METHYL-L-PROPANOL | | | | | | | | | | |
| METHYL-2-BUTANOL | | | | | | | | | | |
| METHYL-2-BUTANONE (Methyl isopropyl ketone) | C | X | X | C | X | X | X | | | X |
| METHYL-2-HEXANONE (Methyl isoamyl ketone) | G | | X | | | X | | | | |
| METHYL-2-PENTANOL (Methyl amyl alcohol) | E | G | E | E | G | G | | | | G |
| METHYL-2-PENTANONE (Methyl isobutyl ketone) | C | X | X | C | X | X | | | | X |
| METHYL-2-PROPEN-L-OL | | | | | | | | | | |
| METHYL-3-PENTEN-1-ONE | | | | | | | | | | |
| METHYL-4-ISOPROPYL BENZENE (Cymene) | X | X | X | X | X | X | | | | X |
| METHYL AMYL ACETATE | | | X | | | X | | | | |
| METHYL AMYL ALCOHOL | E | G | E | E | G | G | | | | G |
| METHYLCYCLOHEXANE | X | X | C | X | X | X | | | | X |
| METHYLENE BROMIDE | X | X | X | X | C | X | | E | E | C |
| METHYLENE CHLORIDE | X | X | X | C | X | X | X | F | F | X |
| METHYLETHYL KETONE | E | X | X | E | X | X | X | | | X |
| METHYL HEXYL KETONE | G | C | X | G | X | X | | E | | X |
| METHYL ISOBUTYL CARBINOL (Methyl amyl alcohol) | E | X | E | C | X | G | | | | X |

FOR APPLICATIONS INVOLVING INDUSTRIAL ACID CHEMICALS AND ALCOHOLS, PLEASE REFER TO T5050G AND T5090E CHEMICAL HOSES.

Chemical Resistance Chart

Key to General Chemical Resistance Chart [all data based on 20°C (68°F) unless noted]:

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COMPOUND

| Chemical or Material Conveyed | CIIR | CR | CSM | EPDM | NBR | NR | SBR | XLPE | UHMWPE | T629AA |
|--|------|----|-----|------|-----|----|-----|------|--------|--------|
| METHYLISOBUTYL KETONE | C | X | X | C | X | X | X | E | E | X |
| METHYLISOPROPYL KETONE | C | X | X | C | X | X | X | | | X |
| METHYLACETONITRILE (Acetone cyanohydrin) | E | G | F | E | X | F | | | | X |
| M-ETHYLPHENOL | | | | | | | | | | |
| METHYLPROPYL CARBINOL | E | | E | | E | E | | | | E |
| METHYLPROPYL KETONE | G | X | X | G | X | X | | E | E | X |
| MIL-A-6091 | E | E | E | E | C | E | | | | C |
| MIL-C-4339 | X | X | X | X | E | X | | | | E |
| MIL-C-7024 | X | C | X | X | E | X | | | | E |
| MIL-E-9500 | E | E | E | E | E | E | E | | | E |
| MIL-F-16884 | X | C | C | X | E | X | X | | | E |
| MIL-F-17111 | X | C | X | X | E | X | X | | | E |
| MIL-F-25558 (RJ-1) | X | C | C | X | E | X | X | | | E |
| MIL-G-10924 | X | C | C | X | E | X | X | | | E |
| MIL-G-25013 | X | C | C | E | E | C | X | | | E |
| MIL-G-25537 | X | C | C | X | E | X | X | | | E |
| MIL-G-3545 | X | C | C | X | E | X | | | | E |
| MIL-G-5572 | X | X | X | X | E | X | X | | | E |
| MIL-G-7711 | X | X | X | X | E | X | X | | | E |
| MIL-H-05606 (HFA) | X | C | C | C | E | X | | | | E |
| MIL-H-13910 | G | E | G | E | E | E | E | | | E |
| MIL-H-19457 | E | X | X | C | X | X | X | | | X |
| MIL-H-22251 | E | C | C | E | C | | G | | | C |
| MIL-H-27601 | X | C | C | X | G | X | | | | G |
| MIL-H-5606 (J43) | X | C | C | C | E | X | | | | E |
| MIL-H-6083 | X | E | C | X | E | C | X | | | E |
| MIL-H-8446 (MLO-8515) | X | E | C | X | G | X | X | | | G |
| MIL-J-5161 | X | X | X | X | C | X | X | | | C |
| MIL-J-5624 (JP-3,JP-4,JP-5) | X | X | X | X | E | X | X | | | E |
| MIL-L-15016 | X | | C | | | X | X | | | |
| MIL-L-17331 | X | | G | | | X | X | | | |
| MIL-L-2104 | X | C | C | X | E | X | | | | E |
| MIL-L-21260 | X | C | C | X | E | X | X | | | E |
| MIL-L-23699 | X | C | C | X | C | X | X | | | C |
| MIL-L-25681 | E | C | C | E | C | C | G | | | C |
| MIL-L-3150 | X | C | C | X | E | X | X | | | E |
| MIL-L-4343 | | | | | | | X | | | |
| MIL-L-6082 | | | | | | | X | | | |
| MIL-L-6085 | X | X | X | X | C | X | X | | | C |
| MIL-L-7808 | X | X | X | X | G | X | X | | | G |
| MIL-L-7870 | X | C | X | X | E | X | X | | | E |
| MIL-L-9000 | X | C | C | X | E | X | X | | | E |
| MIL-L-9236 | X | X | X | X | C | X | X | | | C |
| MIL-P-27402 | E | C | C | E | C | | G | | | C |
| MIL-R-25567 (RP-1) | | | | | | | | | | |
| MIL-R-25576 (RP-1) | X | | C | | | X | | | | |
| MIL-S-3136 TYPE 1 FUEL | X | C | C | X | E | X | X | | | E |
| MIL-S-3136 TYPE 2 FUEL | X | X | X | X | C | X | X | | | C |
| MIL-S-3136 TYPE 3 FUEL | X | X | X | X | G | X | X | | | G |
| MIL-S-3136 TYPE 4 OIL, LOWSWELL | X | X | C | X | E | X | X | | | E |
| MIL-S-3136 TYPE 5 OIL, MEDSWELL | X | G | G | X | E | X | X | | | E |
| MIL-S-3136 TYPE 6 OIL, HI SWELL | X | X | C | X | E | X | X | | | E |
| MIL-S-81087 | E | E | E | E | E | E | E | | | E |

COMPOUND

| Chemical or Material Conveyed | CIIR | CR | CSM | EPDM | NBR | NR | SBR | XLPE | UHMWPE | T629AA |
|---|------|----|-----|------|-----|----|-----|------|--------|--------|
| MINERAL OIL | C | C | C | X | E | X | X | E | E | E |
| MINERAL SPIRITS | X | C | G | X | C | X | X | | | C |
| MOBILE HF A | X | C | X | X | E | X | X | | | E |
| MOLTEN SULFUR | G | E | E | E | G | G | | | | G |
| MONO-CHLOROACETIC ACID | G | C | G | G | X | C | X | E | E | X |
| MONOBUTYL ETHER | C | C | C | C | G | X | X | | | G |
| MONOCHLOROBENZENE | X | X | X | X | X | X | X | F | F | X |
| MONOCHLORODIFLUOROMETHANE (Chlorodifluoromethane) | C | C | E | C | X | C | E | E | E | X |
| MONOETHANOL AMINE | C | G | C | C | G | C | G | | | G |
| MONOETHYL AMINE | C | C | F | E | C | C | F | | | C |
| MORPHOLINE | C | X | X | C | X | X | | | | X |
| MOTOR OIL, 40W | X | C | C | X | E | X | | | | E |
| MTBE (Methyl tert-butyl ether) | G | X | | | X | | | | | X |
| MURIATIC ACID (Hydrogen chloride) | C | C | C | F | C | C | X | | | C |
| N-BUTANAL (Butyraldehyde) | C | X | X | C | X | X | X | E | E | X |
| N-BUTYLAMINE | C | X | X | C | C | X | X | | | C |
| N-BUTYLBENZENE | X | X | X | X | X | X | | | | X |
| N-BUTYLBROMIDE | X | X | X | X | X | X | | | | X |
| N-BUTYLBUTYRATE | E | X | X | E | X | X | X | | | X |
| N-BUTYLCARBINOL (Pentyl alcohol) | E | E | E | E | E | E | | E | E | E |
| N-NONYL ALCOHOL | E | E | E | E | E | E | | | | E |
| N-OCTANE | X | G | X | X | C | X | X | E | E | C |
| N-SERV (75% XYLENE) | | | | | | | | | | |
| NA-K | | | | | | | | | | |
| NAPHTHA | X | X | C | X | C | X | X | E | E | C |
| NAPHTHALENE | X | X | X | X | X | X | X | E | E | X |
| NAPHTHENIC ACID | X | X | X | X | C | X | X | | | C |
| NATURAL GAS | X | E | E | X | E | C | F | E | E | E |
| NEOHXANE | X | G | X | X | E | X | | | | E |
| NEON GAS | E | E | E | E | E | E | E | | | E |
| NEU-TRI | X | | X | | X | X | | | | X |
| NICKEL ACETATE | E | G | X | E | C | E | X | | | C |
| NICKEL CHLORIDE | E | C | E | E | E | E | E | E | E | E |
| NICKEL NITRATE | E | E | E | E | E | E | | E | E | E |
| NICKEL SULFATE | E | E | E | E | E | C | G | E | E | E |
| NIETYLENE | | | | | | | | | | |
| NITRIC ACID, CONC (16N) | X | X | X | X | X | X | | | | X |
| NITRIC ACID, RED FUMING | X | X | X | X | X | X | X | X | X | X |
| NITRIC ACID, 10% | E | G | E | E | X | X | X | E | E | X |
| NITRIC ACID, 13N | | X | | | X | X | | | | X |
| NITRIC ACID, 13N +5% | | X | | | X | X | | | | X |
| NITRIC ACID, 20% | G | X | E | E | X | X | X | E | E | X |
| NITRIC ACID, 30% | F | X | E | F | X | X | X | G | G | X |
| NITRIC ACID, 30% - 70% | F | X | C | X | X | X | X | F | F | X |
| NITRILOTRIETHANOL (Triethanolamine) | E | C | C | E | F | C | G | E | E | F |
| NITROBENZENE | F | X | X | C | X | X | X | E | E | X |
| NITROETHANE | G | C | G | C | X | G | G | | | X |
| NITROGEN | E | E | E | E | E | E | E | E | E | E |
| NITROMETHANE | G | C | C | C | X | G | C | | | X |
| NITROUS OXIDE GAS | | G | | E | E | | | | | E |
| NONANOIC ACID | E | | X | | E | X | | E | E | E |
| NONANOL (Nonyl alcohol) | E | E | E | E | E | E | | | | E |
| NUTO H | | | | | | | | | | |

FOR APPLICATIONS INVOLVING INDUSTRIAL ACID CHEMICALS AND ALCOHOLS, PLEASE REFER TO T5050G AND T5090E CHEMICAL HOSES.

Chemical Resistance Chart

Key to General Chemical Resistance Chart [all data based on 20°C (68°F) unless noted]:

E – Excellent; G – Good; F – Fair; C – Conditional; I – Insufficient Data; X – Not Recommended; Blank – No Data

COMPOUND

| Chemical or Material Conveyed | CIIR | CR | CSM | EPDM | NBR | NR | SBR | XLPE | UHMWPE | T629AA |
|--|------|----|-----|------|-----|----|-----|------|--------|--------|
| NYVAC LIGHT | | | | | | | | | | |
| OCTANOIC ACID (n-Caprylic acid) | F | | G | | F | F | | | | F |
| OCTANOL (Octyl alcohol) | C | C | C | C | C | C | E | | | C |
| OCTYL ACETATE | E | C | E | G | C | C | X | E | E | C |
| OCTYL ALCOHOL | C | C | C | C | C | C | E | | | C |
| OCTYL ALDEHYDE | F | | X | | X | X | | E | E | X |
| OCTYL AMINE | E | G | F | G | F | F | | | | F |
| OCTYL CARBINOL | E | E | E | E | E | E | | | | E |
| OCTYLENE GLYCOL | E | E | E | E | E | E | | | | E |
| OIL-PETROLEUM | | | | | | | X | G | G | |
| OLEIC ACID | X | F | C | X | G | X | X | E | E | G |
| OLEUM (Fuming sulfuric acid) | X | X | X | X | X | X | X | X | X | X |
| OLIVE OIL | C | G | C | G | E | X | X | | | E |
| ORTHO-DICHLOROBENZENE | X | X | X | X | X | X | X | | | X |
| ORTHO-DICHLOROBENZOL (o-Dichlorobenzene) | X | X | X | X | X | X | X | | | X |
| ORTHOXYLENE | X | X | X | X | X | X | X | | | X |
| OXALIC ACID | E | G | E | E | G | C | G | E | E | G |
| OXYDIETHANOL | | | | | | | | | | |
| OZONE | G | F | G | E | X | X | X | E | E | X |
| P-CYMENE | X | X | X | X | X | X | | | | X |
| PAINT THINNER | X | X | X | X | X | X | X | | | X |
| PALMITIC ACID | C | G | C | C | E | C | G | E | E | E |
| PAPERMAKERS ALUM | | | | | | | | | | |
| PARA-DICHLOROBENZENE | X | X | X | X | X | X | X | | | X |
| PARAFFIN WAX | X | G | E | X | E | X | | | | E |
| PARALDEHYDE | E | G | X | E | C | F | | | | C |
| PARAXYLENE (p-Dimethylbenzene) | X | X | X | X | X | X | | | | X |
| PCB | | | | | | | | | | |
| PELARGONIC ALCOHOL (Nonyl alcohol) | E | E | E | E | E | E | | E | E | E |
| PENTACHLOROETHANE | X | X | X | | X | X | | | | X |
| PENTADIONE | | | | | | | | | | |
| PENTAMETHYLENE (Cyclopentane) | X | C | X | X | G | X | | | | G |
| PENTANE | X | E | C | X | E | X | X | E | E | E |
| PENTANOL (Pentyl alcohol) | E | | E | | | | | E | E | |
| PENTANONE | G | X | X | G | X | X | | | | X |
| PENTASOL (Pentachlorophenol) | E | G | E | G | C | X | G | E | E | C |
| PENTYL ACETATE (Amyl acetate) | X | X | X | C | X | C | X | E | E | X |
| PENTYL ALCOHOL (n-Amyl alcohol) | C | C | E | E | C | C | G | E | E | C |
| PENTYL BROMIDE (Amyl bromide) | X | X | X | C | X | X | | | | X |
| PENTYL CHLORIDE (Amyl chloride) | X | X | X | X | X | X | X | E | E | X |
| PENTYL ETHER (Amyl ether) | X | X | F | X | C | X | | | | C |
| PENTYLAMINE (Amylamine) | G | F | F | X | F | F | | | | F |
| PERCHLORIC ACID | C | E | C | G | X | C | X | E | E | X |
| PERCHLOROETHYLENE (Tetrachloroethylene) | X | X | X | X | F | X | X | E | E | F |
| PERCHLOROMETHANE (Carbon tetrachloride) | X | X | X | X | X | X | | | | X |
| PETROLEUM CRUDE | X | G | E | X | G | X | X | E | E | G |
| PETROLEUM ETHER | X | X | C | X | E | X | X | | | E |
| PETROLEUM OILS | X | G | G | X | X | X | X | E | E | X |
| PHENBO | | | | | | | | | | |
| PHENOL | C | X | C | X | X | C | X | E | E | X |
| PHENOLSULFONIC ACID | G | C | C | E | C | C | X | | | C |

COMPOUND

| Chemical or Material Conveyed | CIIR | CR | CSM | EPDM | NBR | NR | SBR | XLPE | UHMWPE | T629AA |
|---|------|----|-----|------|-----|----|-----|------|--------|--------|
| PHENYLAMINE (Aniline) | E | X | C | C | X | X | | E | E | X |
| PHENYLBROMIDE (Bromobenzene) | X | | X | | | X | | | | |
| PHENYLBUTANE | | | | | | | | | | |
| PHENYLCHLORIDE (Chlorobenzene) | X | X | X | X | X | X | | E | E | X |
| PHENYLETHYLENE (Styrene) | X | X | X | X | X | X | X | | | X |
| PHENYLMETHANE (Toluene) | X | X | X | X | X | X | | E | E | X |
| PHENYLMETHANOL (Benzyl alcohol) | E | C | C | C | X | X | | | | X |
| PHENYLMETHYL ACETATE (Acetic acid) | | | | | | | | | | |
| PHOSPHATE ESTERS | E | X | X | E | X | X | X | | | X |
| PHOSPHORIC ACID 10% | E | E | E | E | E | E | E | E | E | E |
| PHOSFORIC ACID 10% - 85% | E | G | E | E | G | G | G | E | E | G |
| PHOSPHORUS TRICHLORIDE | E | X | X | E | X | X | X | E | E | X |
| PICRIC ACID, H2O SOLUTION | G | E | E | E | E | C | G | | | E |
| PINE OIL | X | X | X | X | E | X | X | E | E | E |
| PINENE | X | C | X | X | C | X | X | | | C |
| POLY CHLORINATED BIPHENOL | | | | | | | | | | |
| POLYETHYLENE GLYCOL E-400 | E | G | E | E | C | E | | | | C |
| POLYOL ESTER | | X | | X | G | | | | | G |
| POLYPROPYLENE GLYCOL | E | E | E | | E | E | | E | E | E |
| POTASSIUM ACETATE | E | E | E | E | C | E | X | | | C |
| POTASSIUM BISULFATE | E | E | E | E | E | E | G | | | E |
| POTASSIUM BISULFITE | E | E | E | E | E | E | G | | | E |
| POTASSIUM CARBONATE | E | E | E | E | E | E | E | E | E | E |
| POTASSIUM CHLORIDE | E | E | G | E | E | E | E | E | E | E |
| POTASSIUM CHROMATE | E | E | F | E | G | G | G | | | G |
| POTASSIUM CYANIDE | E | E | E | E | E | E | E | E | E | E |
| POTASSIUM DICHROMATE | E | E | G | E | E | C | G | E | E | E |
| POTASSIUM HYDRATE (Potassium hydroxide) | E | | E | | | C | G | E | E | |
| POTASSIUM HYDROXYDE | E | G | E | E | G | C | G | E | E | G |
| POTASSIUM NITRATE | E | E | E | E | E | E | E | E | E | E |
| POTASSIUM PERMANGANATE, 5% | E | E | G | E | F | E | G | E | E | F |
| POTASSIUM SILICATE | E | E | E | E | E | E | E | | | E |
| POTASSIUM SULFATE | E | E | E | E | E | C | G | E | E | E |
| POTASSIUM SULFIDE | E | E | E | E | C | G | G | | | C |
| POTASSIUM SULFITE | E | E | C | E | E | C | G | E | E | E |
| PRESTONE ANTIFREEZE | E | E | E | E | E | E | E | | | E |
| PRODUCER GAS | X | G | C | X | E | X | X | | | E |
| PROPANE | X | E | C | X | E | X | X | E | E | E |
| PROPANEDIOL | E | G | E | E | E | E | E | E | E | E |
| PROPANETRIOL | E | E | E | E | E | E | E | E | E | E |
| PROPANOL | E | E | E | E | E | E | E | E | E | E |
| PROPANOLAMINE | | | | | | | | | | |
| PROPANONE | E | X | C | E | X | C | G | E | E | X |
| PROPENOL | E | | E | | | E | | | | |
| PROPANEDIAMINE | E | | F | | G | G | | | | G |
| PROPENE NITRILE | X | X | | | X | G | | E | E | X |
| PROPENYL ALCOHOL (Allyl Alcohol) | E | E | E | E | E | E | | E | E | E |
| PROPENYL ANISOLE | X | | X | | X | X | | E | E | X |
| PROPIONIC ACID | E | C | G | E | C | E | X | | | C |
| PROPIONITRILE | E | C | | C | E | E | | | | E |
| PROPYL ACETATE | C | X | X | C | X | X | X | E | E | X |
| PROPYL ALCOHOL | E | E | E | E | E | E | E | E | E | E |
| PROPYL ALDEHYDE | G | X | X | G | X | F | | | | X |

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Chemical Resistance Chart

Key to General Chemical Resistance Chart [all data based on 20°C (68°F) unless noted]:

E – Excellent; G – Good; F – Fair; C – Conditional; I – Insufficient Data; X – Not Recommended; Blank – No Data

COMPOUND

| Chemical or Material Conveyed | CIIR | CR | CSM | EPDM | NBR | NR | SBR | XLPE | UHMWPE | T629AA |
|------------------------------------|------|----|-----|------|-----|----|-----|------|--------|--------|
| PROPYL BENZENE | X | X | X | | | X | | | | |
| PROPYL CHLORIDE | F | F | X | F | X | X | | | | X |
| PROPYL ETHER | | | | | | | | | | |
| PROPYL NITRATE | C | X | X | C | X | X | X | | | X |
| PROPYLENE | X | X | X | X | X | X | X | | | X |
| PROPYLENE DIAMINE | E | | F | | G | G | | | | G |
| PROPYLENE GLYCOL | E | E | E | E | E | E | E | E | E | E |
| PYDRAUL, 'E' SERIES | C | X | X | C | X | X | X | | | X |
| PYDRAULIC 'C' | X | X | X | X | X | X | X | | | X |
| QUINTOLUBRIC 822 SERIES | | | | | | | | | | |
| RED OIL | X | F | C | F | E | X | X | E | E | E |
| REFRIGERANT 11 (Freon 11) | X | | E | | | X | X | E | E | |
| REFRIGERANT 12 (Freon 12) | X | | E | | | X | E | E | E | |
| REFRIGERANT 22 (Freon 22) | X | | E | | | C | E | E | E | |
| RESORCINOL | E | A | G | G | C | E | G | | | C |
| SAE NO. 10 OIL | X | C | X | X | E | X | X | | | E |
| SAL AMMONIAC | E | E | E | E | E | E | E | E | E | E |
| SEA WATER | E | E | E | E | E | E | E | E | E | E |
| SEWAGE | G | C | E | G | E | G | G | E | E | E |
| SILICATE ESTERS | X | E | G | X | G | X | C | | | G |
| SILICATE OF SODA (Sodium silicate) | E | E | E | E | E | E | E | | | E |
| SILICONE GREASE | E | E | E | E | E | E | E | E | E | E |
| SILICONE OIL | E | E | E | E | E | E | E | E | E | E |
| SILVER NITRATE | E | E | E | E | C | E | G | E | E | C |
| SKYDROL 500 TYPE 2 | G | X | X | E | X | X | X | | | X |
| SKYDROL 500B | G | X | X | E | X | X | X | | | X |
| SKYDROL 500C | G | X | X | E | X | X | X | | | X |
| SKYDROL 7000 TYPE 2 | E | X | X | E | X | E | X | | | X |
| SOAP SOLUTIONS | E | G | E | E | E | F | X | E | E | E |
| SODA ASH | E | E | E | E | E | E | X | E | E | E |
| SODA LIME | E | G | G | E | G | E | | | | G |
| SODA NITER | E | G | E | E | E | G | G | E | E | E |
| SODIUM ACETATE | F | C | G | E | G | F | X | E | E | G |
| SODIUM ALUMINATE | E | E | E | E | E | E | G | | | E |
| SODIUM BICARBONATE | E | E | E | E | E | E | E | E | E | E |
| SODIUM BISULFATE | E | E | E | E | E | E | G | E | E | E |
| SODIUM BISULFITE | E | E | E | E | E | E | G | E | E | E |
| SODIUM BORATE | E | E | E | E | E | E | E | E | E | E |
| SODIUM CARBONATE | E | E | E | E | E | E | E | E | E | E |
| SODIUM CHLORIDE | E | E | E | E | E | E | E | E | E | E |
| SODIUM CYANIDE | E | E | E | E | E | E | E | E | E | E |
| SODIUM DICHROMATE | E | F | G | E | E | X | G | | | E |
| SODIUM HYDRATE (Sodium hydroxide) | E | G | C | E | X | E | G | E | E | X |
| SODIUM HYDROCHLORITE | G | F | E | G | F | F | G | | | F |
| SODIUM HYDROXIDE (Caustic soda) | E | G | C | E | X | E | G | E | E | X |
| SODIUM HYPOCHLORITE | C | C | G | E | C | X | F | E | E | C |
| SODIUM METAPHOSPHATE | G | E | C | E | E | E | E | E | E | E |
| SODIUM NITRATE | E | G | E | E | C | G | G | E | E | C |
| SODIUM PERBORATE | E | G | E | E | C | G | G | | | C |
| SODIUM PEROXIDE | E | G | G | E | C | C | G | E | E | C |
| SODIUM PHOSPHATE | E | G | E | E | E | E | E | E | E | E |
| SODIUM SILICATE | E | E | E | E | E | E | E | E | E | E |
| SODIUM SULFATE | E | E | E | E | E | C | G | E | E | E |
| SODIUM SULFIDE | E | E | E | E | E | G | G | E | E | E |

COMPOUND

| Chemical or Material Conveyed | CIIR | CR | CSM | EPDM | NBR | NR | SBR | XLPE | UHMWPE | T629AA |
|-------------------------------|------|----|-----|------|-----|----|-----|------|--------|--------|
| SODIUM SULFITE | E | E | E | E | E | G | G | E | E | E |
| SODIUM THIOSULFATE | E | E | E | E | C | G | | E | E | C |
| SOYBEAN OIL | G | E | G | C | E | X | X | | | E |
| STANNIC CHLORIDE | E | G | E | E | E | E | E | E | E | E |
| STANNIC SULFIDE | E | E | E | E | E | E | | | | E |
| STANNOUS CHLORIDE | E | E | E | G | E | E | E | E | E | E |
| STANNOUS SULFIDE | E | E | E | E | E | E | | | | E |
| STEAM, BELOW 350 DEG F | G | X | C | E | X | C | X | X | X | X |
| STEARIC ACID | C | G | G | G | G | C | G | E | E | G |
| STODDARD SOLVENT | X | G | X | X | E | X | X | E | E | E |
| STYRENE | X | X | X | X | X | X | X | F | F | X |
| SULFAMIC ACID | E | G | E | E | C | G | | | | C |
| SULFUR | E | E | E | E | X | X | X | E | E | X |
| SULFUR CHLORIDE | X | E | | E | C | X | X | | | C |
| SULFUR DIOXIDE | C | C | C | E | X | C | G | | G | X |
| SULFUR TRIOXIDE, DRY | G | X | X | E | X | C | X | X | X | X |
| SULFURIC ACID 60% (200°F) | E | X | G | E | G | X | X | X | X | G |
| SULFURIC ACID, CONC. | X | X | X | X | X | X | X | F | F | X |
| SULFURIC ACID, FUMING | X | X | X | X | X | X | X | X | X | X |
| SULFURIC ACID, 25% | G | C | E | E | C | E | F | E | E | C |
| SULFURIC ACID, 25%-50% | G | X | G | E | C | G | F | E | E | C |
| SULFURIC ACID, 50%-96% | C | X | C | X | X | C | X | G | G | X |
| SULFUROUS ACID, 10% | E | C | E | E | E | G | G | E | E | E |
| SULFUROUS ACID, 10%-75% | E | C | E | E | F | G | G | E | E | F |
| SUTAN | | | | | | | | | | |
| T-BUTYL AMINE | C | X | X | C | C | X | | | | C |
| TALL OIL | X | C | F | X | E | X | X | | | E |
| TALLOW | X | G | F | E | E | X | X | E | E | E |
| TANNIC ACID | E | E | E | E | E | E | G | E | E | E |
| TAR | X | X | | X | X | X | X | F | X | X |
| TAR BITUMINOUS | X | C | X | X | G | X | X | | | G |
| TARTARIC ACID | G | E | E | G | E | E | G | E | E | E |
| TELLONE 2 | | | | | | | C | | | |
| TERTIARY BUTYL ALCOHOL | C | C | C | C | C | C | G | | | C |
| TERPINEOL | C | | X | | | X | X | | | |
| TERTIARY BUTYL AMINE | C | X | X | C | C | X | | | | C |
| TERTIARY BUTYL MERCAPTAN | X | X | X | X | X | X | X | | | X |
| TEST ENTRY | | | | | | | | | | |
| TEST ENTRY 1 | | | | | | | | | | |
| TETRACHLOROBENZENE | X | X | X | X | X | X | | | | X |
| TETRACHLOROETHANE | X | X | X | X | X | X | X | F | F | X |
| TETRACHLOROETHYLENE | X | X | X | X | C | X | X | F | F | C |
| TETRACHLOROMETHANE | X | X | X | X | X | X | | E | E | X |
| TETRACHLORONAPHTHALENE | X | X | X | X | X | X | | E | E | X |
| TETRAETHYLENE GLYCOL | E | E | E | E | E | E | | | | E |
| TETRAETHYLORTHO-SILICATE | E | E | | E | E | X | | | | E |
| TETRAHYDROFURAN (THF) | C | X | X | X | X | X | X | | | X |
| TIN CHLORIDE | E | C | C | E | E | E | | E | E | E |
| TITANIUM TETRACHLORIDE | X | C | X | X | C | X | X | | | C |
| TOLUENE | X | X | X | X | X | X | X | E | E | X |
| TOLUIDINE | X | X | X | X | C | X | | E | F | C |
| TOLUOL (Toluene) | X | X | X | X | X | X | X | E | E | X |
| TRANSFORMER OIL | X | C | C | X | C | X | X | E | E | C |
| TRANSMISSION 'A' OIL | X | C | C | X | E | X | | | | E |

FOR APPLICATIONS INVOLVING INDUSTRIAL ACID CHEMICALS AND ALCOHOLS, PLEASE REFER TO T5050G AND T5090E CHEMICAL HOSES.

Key to General Chemical Resistance Chart [all data based on 20°C (68°F) unless noted]:

E – Excellent; G – Good; F – Fair; C – Conditional; I – Insufficient Data; X – Not Recommended; Blank – No Data

COMPOUND

| Chemical or Material Conveyed | CIIR | CR | CSM | EPDM | NBR | NR | SBR | XLPE | UHMWPE | T629AA |
|---|------|----|-----|------|-----|----|-----|------|--------|--------|
| TRI(2-HYDROXYETHYL) AMINE (Triethanolamine) | E | C | C | E | G | C | | | | G |
| TRIBUTYL PHOSPHATE | G | | X | G | F | C | X | | | F |
| TRIBUTYLAMINE | E | | F | | G | C | | | | G |
| TRICHLOROACETIC ACID | C | C | X | C | C | C | X | | | C |
| TRICHLOROBENZENE | X | X | X | X | C | X | X | F | F | C |
| TRICHLOROETHANE | X | X | X | X | X | X | X | | | X |
| TRICHLOROETHYLENE | X | X | X | X | X | X | X | F | F | X |
| TRICHLOROMETHANE | X | X | X | X | X | X | X | F | F | X |
| TRICHLOROTOLUENE (Benzotrifluoride) | | X | X | E | X | X | | | | X |
| TRICRESYL PHOSPHATE | E | X | X | E | X | X | X | | | X |
| TRIETHANOLAMINE | E | C | C | E | C | C | G | E | E | C |
| TRIETHYLAMINE | G | G | E | E | E | G | X | | | E |
| TRIETHYLENE GLYCOL | E | E | E | E | C | E | | E | E | C |
| TRIHIDROXYBENZOIC ACID | C | C | G | C | C | E | | | | C |
| TRIMETHYL PENTANE (MIXED) | X | G | C | X | E | X | X | | | E |
| TRIMETHYL PENTENE | | | | | | | | | | |
| TRIMETHYLAMINE | E | E | E | C | C | E | | | | C |
| TRISODIUM PHOSPHATE | E | E | E | E | E | E | E | E | E | E |
| TRITOLYL PHOSPHATE | E | C | C | E | X | X | X | | | X |
| TUNG OIL | C | C | C | X | E | X | X | E | E | E |
| TUNG OIL (CHINA OIL) | C | C | C | X | E | X | X | E | E | E |
| TURPENTINE | X | X | X | X | E | X | X | E | E | E |
| UNSYMMETRICAL DIMETHYL HYDRAZINE (UDMH) | E | C | E | E | C | E | X | | | C |
| UNDECYL ALCOHOL | E | E | E | E | E | E | | | | E |
| UREA (Carbamide) | E | G | E | E | G | E | | E | E | G |
| URETHANE FORMULATIONS | | | | | | | | | | |
| URIC ACID | E | E | E | E | C | E | | | | C |
| VARNISH | X | X | X | X | G | X | X | E | E | G |
| VEGETABLE OILS | C | C | G | F | E | X | X | E | E | E |
| VERSILUBE F44 | E | E | E | E | E | E | E | | | E |
| VERSILUBE F55 | E | E | E | X | E | E | E | | | E |
| VINEGAR (Acetic acid) | E | G | E | E | G | G | G | E | E | G |
| VINEGAR ACID (Vinegar) | E | | E | | | G | | E | E | |
| VINYL ACETATE | E | C | F | G | C | X | X | E | E | C |
| VINYL BENZENE | X | X | X | X | C | X | X | F | F | C |
| VINYL CHLORIDE | X | X | X | C | X | X | | E | E | X |
| VINYL CYANIDE | X | X | G | X | X | G | F | E | E | X |
| VINYL ETHER (Divinyl ether) | X | | G | | G | X | | | | G |
| VINYL STYRENE | | | | | | | | | | |
| VINYL TOLUENE | X | X | X | X | X | X | | | | X |
| VINYL TRICHLORIDE (Trichloroethane) | X | X | X | X | X | X | | | | X |
| VITAL, 4300,5310 | | | | | | | | | | |
| VM & NAPHTHA | X | F | X | X | G | X | X | | | G |
| WATER | E | G | E | E | E | E | C | E | E | E |
| WATER, BOILING | E | G | E | E | G | E | | | | G |
| WATER, SODA | | | | | | | | E | E | |
| WEMCO C | X | C | X | X | E | X | X | | | E |
| WHISKEY | E | E | E | E | E | E | E | E | E | E |
| WHITE OIL | X | G | C | X | E | X | X | E | E | E |
| WHITE PINE OIL | X | X | X | X | C | X | X | | | C |
| WINES | E | E | E | E | E | E | E | E | E | E |
| WOOD ALCOHOL (Methanol) | C | E | E | E | C | E | E | E | E | C |

COMPOUND

| Chemical or Material Conveyed | CIIR | CR | CSM | EPDM | NBR | NR | SBR | XLPE | UHMWPE | T629AA |
|--|------|----|-----|------|-----|----|-----|------|--------|--------|
| WOOD OIL | C | C | C | X | E | X | X | E | E | E |
| XENON | E | E | E | E | E | E | E | | | E |
| XYLENE, XYLON | X | X | X | X | X | X | X | F | F | X |
| XYLIDINE | G | X | X | G | C | X | X | | | C |
| ZEOLITES | E | E | E | E | E | E | E | | | E |
| ZINC ACETATE | E | C | | E | G | E | X | | | G |
| ZINC CARBONATE | E | E | E | E | E | E | | | | E |
| ZINC CHLORIDE | E | E | E | E | E | E | E | E | E | E |
| ZINC CHROMATE | E | E | G | E | C | E | | | | C |
| ZINC SULFATE | E | E | E | E | E | E | G | E | E | E |
| 0-AMINOTOLUENE (o-Methylaniline) | C | X | X | C | X | X | | | | X |
| 1 UNDECANOL | E | E | E | E | E | E | E | E | G | E |
| 1-AMINO-2-PROPANOL (Isopropanolamine) | E | E | F | E | C | G | | | | C |
| 1-AMINO BUTANE (Butylamine) | C | X | X | C | C | X | X | | | C |
| 1-AMINOPENTANE (Amylamine) | G | C | F | X | F | F | | | | F |
| 1-BROMO-2-METHYL PROPANE (Isobutyl bromide) | X | X | X | X | X | X | | | | X |
| 1-BROMO-3-METHYL BUTANE (Isoamyl bromide) | X | X | X | X | X | X | | | | X |
| 1-BROMOBUTANE (n-Butyl bromide) | X | X | X | X | X | X | | | | X |
| 1-CHLORO-2-METHYL PROPANE (Isobutyl chloride) | X | X | X | X | X | X | | | | X |
| 1-CHLORO-3-METHYL BUTANE (Isoamyl chloride) | X | X | X | X | X | X | | | | X |
| 1-DECANOL | X | X | C | X | E | X | | E | E | E |
| 1-HENDECANOL (Undecanol) | E | E | E | E | E | E | | | | E |
| 1,4-DIOXANE | C | X | X | C | X | X | | E | | X |
| 2(2AMINOETHYLAMINO) ETHANOL (N-(Aminoethyl)ethanolamine) | E | | G | | | G | | | | |
| 2(2ETHOXYETHOXY) ETHANOL (Carbitol) | C | C | C | C | C | C | G | | | C |
| 2(2ETHOXYETHOXY) ETHYL ACETATE (Carbitol acetate) | G | X | G | X | X | X | X | | | X |
| 2-AMINOETHANOL (Ethanolamine) | C | C | C | E | C | C | F | | | C |
| 2-CHLORO-1-HYDROXY-BENZENE (o-Chlorophenol) | X | X | X | X | X | X | | | | X |
| 2-CHLOROPHENOL | X | X | X | X | X | X | X | | | X |
| 2-CHLOROPROPANE | X | X | X | X | X | X | X | | | X |
| 2-ETHOXYETHANOL | C | X | X | C | C | X | X | E | E | C |
| 2-ETHOXYETHYL ACETATE | C | X | X | G | X | C | | E | E | X |
| 2-ETHYL(BUTYRALDEHYDE) | G | | X | | X | X | | | | X |
| 2-ETHYL-1-HEXANOL | C | C | C | C | C | G | G | E | E | C |
| 2-ETHYLHEXANOIC ACID (Ethylhexoic acid) | F | | G | | F | F | | | | F |
| 2-ETHYLHEXYL ACETATE | E | | G | | X | X | | C | C | X |
| 2-OCTANONE (Methyl hexyl ketone) | G | C | | G | X | X | | | | X |
| 2,4-DI-SEC--PENTYLPHENOL | | | | | | | | | | |
| 3-BROMOPROPENE (Allyl bromide) | X | X | X | X | X | X | | | | X |
| 3-CHLORO-2-METHYL PROPANE | | | | | | | | | | |
| 3-CHLOROPROPENE | C | X | X | X | C | X | E | E | G | C |
| 3-COAL OIL | X | G | F | X | E | X | | | | E |
| 4-HYDROXY-4-METHYL-2-PENTANONE (Diacetone alcohol) | E | F | C | E | X | X | X | E | E | X |

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