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TYPE B  
TYPE C  
TYPE D  
TYPE DA  
TYPE DC  
TYPE DD

# SEALFAST



**SEALFAST**  
THE SIMPLE SOLUTION



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TERMS OF SALE

DISCLAIMERS

TERMS:

1/2% 10 Days, net 30 Days

FREIGHT:

All shipments are made FOB Seal Fast Inc. or Point of Manufacturer. (Applies to shipments from Houston Warehouse Only) Freight prepaid on 1000 net couplings and accessories, \$1500 Net Couplings, PVC Tubing, Braided Tubing and Fire Hose. Freight prepaid on \$3000 Net Couplings, Rubber Hose, PVC Hose and Sheet Rubber with the exclusion of all PVC Suction including 6" and 8" PVC Suction ONLY orders. If combined with other items freight is prepaid at \$3000 Net, otherwise these items will Not be applied toward prepaid freight. **Effective immediately, regardless of invoice value, all uncoupled cut lengths of hoses are shipped FOB Seal Fast Inc.** Seal Fast Inc. reserves the right to determine the most Economical shipping method on all prepaid shipments. **In addition, Seal Fast Inc. reserves the right to refuse any prepaid shipments exceeding 6% freight cost of the order unless items are added or subtracted to keep said freight cost at or below 6%.** Applies to Continental United States, excluding Alaska and Hawaii. **Any evidence of shortage must be reported to Seal Fast Inc. within 10 days. Any Damage to hose/hoses, etc. customer is responsible for filing a claim with the delivery carrier within 10 days. Seal Fast Inc. will not issue credit.**

ALL UPS prepay and add or collect shipments will endure a **\$7.50** shipping and handling fee including All backorders. All drop shipments will endure a \$5.00 fee.

WARRANTY:

Products are warranted against defects in workmanship and defects in material. Products having such defects will be replaced or credited as Seal Fast elects. Liability is limited to the invoice value of the defective item. Our responsibility shall not exceed the original purchase price of the defective product. In any event, Seal Fast, Inc. shall not be held responsible for any special or consequential damages.

RETURNED GOODS:

If for any reason you wish to return goods, please contact Seal Fast Inc. for prior authorization number. Goods must be returned within 30 days and must be in new and resaleable condition. Minimum handling charge is 15%.

All discrepancies in shipment / invoice must be reported within 10 days of receipt of goods.

PROMPTPAYMENT:

Orders receive preferred treatment when the account is paid promptly. Orders may be held up if any unpaid invoice exceeds 30 days.

MINIMUM INVOICE:

All invoices are subject to a minimum billing charge of 50.00 net. Returned checks are subject to a \$25.00 service charge.

GENERAL:

Orders will be accepted subject to delays caused by accident, strike, fire or other causes beyond the control of the seller including failure of seller's suppliers to deliver. Prices, discounts and other specifications are subject to change without notice. All prices are subject to any applicable taxes imposed. The possessions of this price schedule is not to be construed as an offer to sell at the prices shown. Special price for volume quotes will be accepted in writing only.

PLEASE NOTE:

Extra care is taken in the preparation of this literature but Seal Fast, Inc. is not responsible for any inadvertent typographical errors or omissions.

STOCKING WAREHOUSES

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(713) 675-6324 or 800-231-0734

FAX (713) 675-0146 or 800-681-1515

E-mail sales@sealfast.com

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1150 Boot Road

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(610) 518-2301

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(303) 477-6504 Fax

THE WAGNER GROUP

125 State St.

P O Box 1683

Elkhart, IN 46516

(574) 294-2769

(574) 522-2083 Fax

DISCLAIMERS

Product Images

- Seal Fast makes every reasonable effort to show accurate product representation, however pictures are for reference only, and do not necessarily reflect the exact product you will receive.
- Seal Fast reserves the right to alter product appearance without notice. Some product features shown in pictures may no longer be available.

Product Specifications

- Seal Fast is continuously working to provide the best quality for the best price.
- We reserve the right to alter product specifications without notice.

Product Usage

- Our Sales Team will do their best to assist in choosing the best product for a particular application. However, it is ultimately the customer's responsibility to determine the correct product for the correct application.
- Seal Fast will not be held liable for the abuse or misuse of our products in a manner in which they are not designed.
- Seal Fast cannot guarantee the integrity of an assembly if other manufacturers parts are used.

Product Availability

- Seal Fast reserves the right to discontinue products at any time without prior notice.

Product Pricing

- Seal Fast is constantly doing our best to maintain pricing levels. However, circumstances change and while many prices go down, others will increase.
- Please contact your sales associate for current pricing.

CAM & GROOVE COUPLINGS


SELF LOCKING

SELF LOCKING

CAM & GROOVE COUPLINGS

FEMALE COUPLER X MALE NPT

TYPE B



| Size   | WORKING PSI | ALUMINUM  |      | BRASS     |      | 316 SS   |      |
|--------|-------------|-----------|------|-----------|------|----------|------|
|        |             | Part #    | List | Part #    | List | Part #   | List |
| 1"     | 150         | B 100ALSK |      | B 100BRSK |      | B 100SSK |      |
| 1-1/2" | 150         | B 150ALSK |      | B 150BRSK |      | B 150SSK |      |
| 2"     | 150         | B 200ALSK |      | B 200BRSK |      | B 200SSK |      |
| 2-1/2" | 150         | B 250ALSK |      | B 250BRSK |      | B 250SSK |      |
| 3"     | 150         | B 300ALSK |      | B 300BRSK |      | B 300SSK |      |
| 4"     | 150         | B 400ALSK |      | B 400BRSK |      | B 400SSK |      |

TYPE C



| Size   | WORKING PSI | ALUMINUM  |      | BRASS     |      | 316 SS   |      |
|--------|-------------|-----------|------|-----------|------|----------|------|
|        |             | * Part #  | List | * Part #  | List | * Part # | List |
| 1"     | 150         | C 100ALSK |      | C 100BRSK |      | C 100SSK |      |
| 1-1/2" | 150         | C 150ALSK |      | C 150BRSK |      | C 150SSK |      |
| 2"     | 150         | C 200ALSK |      | C 200BRSK |      | C 200SSK |      |
| 2-1/2" | 150         | C 250ALSK |      | C 250BRSK |      | C 250SSK |      |
| 3"     | 150         | C 300ALSK |      | C 300BRSK |      | C 300SSK |      |
| 4"     | 150         | C 400ALSK |      | C 400BRSK |      | C 400SSK |      |

\* WARNING: Working Pressures may vary depending on how the couplings are attached to the hose assembly. Before operation, always check the hose assembly for proper attachment and that couplings are in working order.

FEMALE COUPLER X MALE ADAPTER w/PIPE TAP

TYPE DA



| Size    | WORKING PSI | 316 SS     |      |
|---------|-------------|------------|------|
|         |             | Part #     | List |
| 3" X 2" | 150         | DA 3020SSK |      |

| 316 SS       |      |
|--------------|------|
| Part #       | List |
| DA 3020-1SSK |      |

w/ 1/2" Pipe Tap

FEMALE COUPLER X FEMALE NPT


TYPE D



| Size   | WORKING PSI | ALUMINUM  |      | BRASS     |      | 316 SS   |      |
|--------|-------------|-----------|------|-----------|------|----------|------|
|        |             | Part #    | List | Part #    | List | Part #   | List |
| 1"     | 150         | D 100ALSK |      | D 100BRSK |      | D 100SSK |      |
| 1-1/2" | 150         | D 150ALSK |      | D 150BRSK |      | D 150SSK |      |
| 2"     | 150         | D 200ALSK |      | D 200BRSK |      | D 200SSK |      |
| 2-1/2" | 150         | D 250ALSK |      | D 250BRSK |      | D 250SSK |      |
| 3"     | 150         | D 300ALSK |      | D 300BRSK |      | D 300SSK |      |
| 4"     | 150         | D 400ALSK |      | D 400BRSK |      | D 400SSK |      |

- NOT DESIGNED FOR PRESSURE APPLICATIONS -


TYPE DC



| Size   | WORKING PSI | ALUMINUM   |      | BRASS      |      | 316 SS    |      |
|--------|-------------|------------|------|------------|------|-----------|------|
|        |             | Part #     | List | Part #     | List | Part #    | List |
| 1"     | 0           | DC 100ALSK |      | DC 100BRSK |      | DC 100SSK |      |
| 1-1/2" | 0           | DC 150ALSK |      | DC 150BRSK |      | DC 150SSK |      |
| 2"     | 0           | DC 200ALSK |      | DC 200BRSK |      | DC 200SSK |      |
| 2-1/2" | 0           | DC 250ALSK |      | DC 250BRSK |      | DC 250SSK |      |
| 3"     | 0           | DC 300ALSK |      | DC 300BRSK |      | DC 300SSK |      |
| 4"     | 0           | DC 400ALSK |      | DC 400BRSK |      | DC 400SSK |      |

FEMALE COUPLER X FEMALE COUPLER

TYPE DD



| Size | WORKING PSI | 316 SS    |      |
|------|-------------|-----------|------|
|      |             | Part #    | List |
| 2"   | 150         | DD 200SSK |      |
| 3"   | 150         | DD 300SSK |      |

\* With auto-lock handles

\*\* Available as: 1-1/4 adapter or coupler X 1-1/4 NPT | Please specify: 1-1/2 adapter or coupler X 1-1/4 NPT | 1-1/2 adapter or coupler X 1-1/2 NPT  
Note: All Seal Fast Cam & Groove Stainless Bodies are 316 Investment with 304 Handles. \* Dust Caps and Dust Plugs are not designed for pressure applications.

**WARNING:** Cam & Groove Couplings should NOT be used with any compressed gas, including steam or air. Metal fittings should not be used with Polypropylene Cam & Groove.

\*\* Available as: 1-1/4 adapter or coupler X 1-1/4 NPT | Please specify: 1-1/2 adapter or coupler X 1-1/4 NPT | 1-1/2 adapter or coupler X 1-1/2 NPT  
Note: All Seal Fast Cam & Groove Stainless Bodies are 316 Investment with 304 Handles. \* Dust Caps and Dust Plugs are not designed for pressure applications.

**WARNING:** Cam & Groove Couplings should NOT be used with any compressed gas, including steam or air. Metal fittings should not be used with Polypropylene Cam & Groove.



TECHNICAL DATA

CORROSION RESISTANCE OF COUPLING MATERIALS

**CAUTION:** The following data has been compiled from generally available sources end should not be relied upon without consulting and following the specific recommendations of the manufacturer regarding particular coupling materials.

|   |  |  |
|---|--|--|
| <b>RATINGS:</b> 1. Excellent<br>2. Good | 3. Fair Conditional<br>x. Not Satisfactory | <b>NOTES:</b> No rationg indicates no data available |
|---|--|--|

| AGENT                              | Mall. From Steel | Brass | Bronze | Aluminum | Glass | Stainless 410, 416, 430 | Stainless 302, 202, 304, 308 | Stainless 316 | Monel |
|------------------------------------|------------------|-------|--------|----------|-------|-------------------------|------------------------------|---------------|-------|
| Acetate, Solvents, Crude           |                  | 3     |        |          |       | 2                       | 1                            | 1             | 2     |
| Acetate, Solvents, Pure            |                  | 1     | 1      | 1        |       | 1                       | 1                            | 1             | 1     |
| Acetic Acid                        | X                | X     | X      | 2        | 1     | X                       | 2                            | 2             | 2     |
| Acetic Acid Vapor                  | X                | X     |        | 3        |       | X                       | 2                            | 2             | 3     |
| Acetic Anhydride                   | X                | X     |        | 2        |       | X                       | 2                            | 2             | 2     |
| Acetone                            | 1                | 1     | 1      | 1        | 1     | 1                       | 1                            | 1             | 1     |
| Acetylene                          | 1                | 2     |        | 1        |       | 1                       | 1                            | 1             | 2     |
| Alcohols                           | 1                | 2     |        | 1        |       | 1                       | 1                            | 1             | 1     |
| Aluminum Sulfate                   | X                | 3     | 3      | 3        | 1     | X                       | 3                            | 2             | 2     |
| Alums                              | X                | 3     | 2      | 3        | 1     | X                       | 3                            | 2             | 2     |
| Ammonia Gas                        | 1                | X     | 3      | 1        | 3     | 1                       | 1                            | 1             | X     |
| Ammonium Chloride                  | 1                | 3     |        | 1*       |       | 3                       | 3                            | 1             | 1     |
| Ammonium Hydroxide                 | 2                | X     |        | 2        |       | 1                       | 1                            | 1             | 3     |
| Ammonium Nitrate                   | 1                | X     |        | 2        |       | 1                       | 1                            | 1             | 3     |
| Ammonium Phosphate (Ammoniacal)    |                  | X     |        |          |       | 1                       | 1                            | 1             | 2     |
| Ammonium Phosphate (Neutral)       |                  | 3     |        |          |       | 1                       | 1                            | 1             | 2     |
| Ammonium Phosphate (Acid)          |                  | 3     |        |          |       | 3                       | 2                            | 1             | 2     |
| Ammonium Sulfate                   | 1                | 3     |        |          |       | 2                       | 1                            | 1             | 2     |
| Asphalt                            | 1                | 2     |        |          |       | 2                       | 1                            | 1             | 1     |
| Beer                               | 2                | 2     | 1      | 1        |       | X                       | 1                            | 1             | 1     |
| Beet SugarLiquors                  | 1                | 2     |        | 1        |       | 2                       | 1                            | 1             | 1     |
| Benzene, Benzol                    | 1                | 1     | 1      | 1        | 1     | 1                       | 1                            | 1             | 1     |
| Benzine (petroleum-naphtha)        | 1                | 1     |        | 1        |       | 1                       | 1                            | 1             | 1     |
| Borax                              | 2                | 2     |        |          |       | 1                       | 1                            | 1             | 1     |
| Boric Acid                         | X                | 3     |        | 1        |       | 3                       | 2                            | 1             | 1     |
| Butane, Butylene                   | 1                | 1     | 1      | 1        |       | 1                       | 1                            | 1             | 1     |
| Butadiene                          |                  | 1     |        |          |       | 1                       | 1                            | 1             | 1     |
| Calcium Bisulfate                  |                  | X     |        |          |       | X                       | 2                            | 1             | X     |
| Calcium Hypochlorite               | 3                | 3     | 3      | X        | 3     | X                       | 3                            | 2             | 3     |
| Cane Sugar Liquors                 | 1                | 2     |        | 1        |       | 2                       | 1                            | 1             | 1     |
| Carbon Dioxide (Dry)               | 1                | 1     |        | 1        |       | 1                       | 1                            | 1             | 1     |
| Carbon Dioxide (Wet & Aqueous Sol) | 2                | 3     |        | 2        |       | 2                       | 1                            | 1             | 2     |
| Carbon Disulfide                   | 2                | 3     |        | 2        |       | 2                       | 1                            | 1             | 3     |
| Carbon Tetrachloride               | 3                | 1     | 2      | 3        | 1     | 1                       | 1                            | 1             | 1     |
| Chlorine (Dry)                     | 2                | 2     | 2      | 1        | 2     | 2                       | 2                            | 2             | 1     |
| Chlorine (Wet)                     | X                | X     | 3      | X        | 2     | X                       | X                            | 3             | 3     |
| Chromic Acid                       |                  | X     | X      | X        | 1     | 3                       | 2                            | 2             | 3     |
| Citric Acid                        | X                | 3     |        | 1        |       | 3                       | X                            | 1             | 2     |
| Coke Oven Gas                      | 1                | 3     |        | 2        |       | 1                       | 1                            | 1             | 2     |
| Copper Sulfate                     | X                | X     |        | X        |       | 1                       | 1                            | 1             | 3     |
| Core Oils                          |                  | 1     | 1      |          |       | 1                       | 1                            | 1             | 1     |
| Cottonseed Oil                     | 1                | 1     | 1      | 1        |       | 1                       | 1                            | 1             | 1     |
| Creosote                           | 2                | 3     |        | 1        |       | 1                       | 1                            | 1             | 1     |
| Ethers                             | 2                | 1     |        | 1        |       | 1                       | 1                            | 1             | 1     |
| Ethylene Glycol                    | 2                | 2     |        |          |       | 1                       | 1                            | 1             | 1     |
| Ferric Chloride                    | X                | X     | X      | X        | 1     | X                       | X                            | X             | X     |
| Ferric Sulfate                     | X                | X     |        | X        |       | 1                       | 1                            | 1             | 3     |
| Formaldehyde                       | 2                | 2     |        | 2        |       | 1                       | 1                            | 1             | 1     |

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|---|--|--|

| AGENT                         | Mall. From Steel | Brass | Bronze | Aluminum | Glass | Stainless 410, 416, 430 | Stainless 302, 202, 304, 308 | Stainless 316 | Monel |
|-------------------------------|------------------|-------|--------|----------|-------|-------------------------|------------------------------|---------------|-------|
| Formic Acid                   | X                | 2     |        | X        |       | X                       | 2                            | 1             | 2     |
| Freon                         | 3                | 1     | 1      | 1        |       | 1                       | 1                            | 1             | 1     |
| Furfural                      | 1                | 2     |        | 1        |       | 1                       | 1                            | 1             | 1     |
| Gasoline (Sour)               | 3                | 3     |        | 3        |       | 3                       | 1                            | 1             | X     |
| Gasoline (Refined)            | 1                | 1     | 1      | 1        |       | 1                       | 1                            | 1             | 1     |
| Gelatin                       | 1                | 3     |        | 1        |       | 1                       | 1                            | 1             | 1     |
| Glucose                       | 1                | 1     |        | 1        |       | 1                       | 1                            | 1             | 1     |
| Glue                          | 1                | 3     |        | 1        |       | 1                       | 1                            | 1             | 1     |
| Glycerine or Glycerol         | 1                | 2     |        | 1        |       | 1                       | 1                            | 1             | 1     |
| Hydrochloric Acid             | X                | X     | X      | X        | 1     | X                       | X                            | X             | X     |
| Hydrocyanic Acid              | 3                | X     |        | 1        |       | 3                       | 1                            | 1             | 2     |
| Hydrofluoric Acid             | X                | 3     | 3      | X        | X     | X                       | X                            | X             | X     |
| Hydrogen Fluoride             |                  | 3     |        |          |       | X                       | X                            | 3             | 1     |
| Hydrogen                      | 1                | 1     |        | 1        |       | 1                       | 1                            | 1             | 1     |
| Hyrogen Peroxide              | X                | X     |        | 1        |       | 1                       | 2                            | 1             | 2     |
| Hydrogen Sulfide (Dry)        | 3                | 3     |        | 2        |       | 3                       | 2                            | 1             | 3     |
| Hydrogen Sulfide (Wet)        | 3                | 3     |        | 2        |       | 3                       | 2                            | 1             | 3     |
| Lacquers and Lacquer Solvents | 3                | 2     |        | 1        |       | 1                       | 1                            | 1             | 1     |
| Lactic Acid                   | X                |       |        | 3        |       |                         | 3                            | 2             | 1     |
| Lime-Sulfur                   | 2                | X     |        | 2        |       | 1                       | 1                            | 2             |       |
| Linseed Oil                   | 1                | 1     |        | 1        |       |                         | 1                            | 1             | 1     |
| Magnesium Chloride            | 3                | 3     |        | X        |       | 3                       | 2                            | 1             | 1     |
| Magnesium Hydroxide           | 1                | 2     |        | X        |       | 1                       | 1                            | 1             | 1     |
| Magnesium Sulfate             | 2                | 2     |        | 3        |       | 1                       | 1                            | 1             | 1     |
| Mercuric Chloride             | 3                | X     |        | X        |       | X                       | X                            | 3             | X     |
| Mercury                       | 1                | X     |        | X        |       | 1                       | 1                            | 1             | 2     |
| Milk                          | 3                | 3     |        | 1        |       | 2                       | 1                            | 1             | 3     |
| Molasses                      | 2                | X     |        | 2        |       | 2                       | 1                            | 1             | 1     |
| Natural Gas                   | 1                | 2     |        | 1        |       | 1                       | 1                            | 1             | 1     |
| Nickel Chloride               |                  | X     |        | X        |       | X                       | 3                            | 2             | 2     |
| Nickel Sulfate                |                  | 3     |        | X        |       | 3                       | 2                            | 1             | 1     |
| Nitric Acid                   | X                | X     | X      | 3        | 1     | 2                       | 2                            | 2             | X     |
| Oleic Acid                    | 2                | 3     |        | 1        |       | 2                       | 2                            | 1             | 1     |
| Oxalic Acid                   | 3                | 3     |        | 2        |       | 3                       | 2                            | 1             | 1     |
| Oxygen                        | 1                | 1     | 1      | 1        |       | 1                       | 1                            | 1             | 1     |
| Palmitic Acid                 | 1                | 3     |        | 1        |       | 2                       | 2                            | 1             | 1     |
| Petroleum Oils (Sour)         |                  | 3     |        |          |       | 3                       | 1                            | 1             | X     |
| Petroleum Oils (Refined)      | 1                | 1     | 1      | 1        |       | 1                       | 1                            | 1             | 1     |
| Phosphoric Acid 25%           | 3                | X     |        | 3        | 3     | X                       | 3                            | 1             | 2     |
| Phosphoric Acid 25-50%        | X                | X     |        | X        | 3     | X                       | X                            | 2             | 2     |
| Phosphoric Acid 50-85%        | X                | X     |        | X        | X     | X                       | X                            | 2             | 2     |
| Picric Acid                   | 3                | X     |        | 3        |       | 2                       | 1                            | 1             | X     |
| Potassium Chloride            | 2                | 3     |        | 3        |       | 3                       | 2                            | 1             | 1     |
| Potassium Hydroxide           | 3                | X     |        | X        |       | 1                       | 1                            | 1             | 1     |
| Potassium Sulfate             | 2                | 2     |        | 1        |       | 1                       | 1                            | 1             | 1     |
| Propane                       | 1                | 1     |        |          |       | 1                       | 1                            | 1             | 1     |
| Rosin (Dark)                  | 1                | 2     |        |          | 1     | 1                       | 1                            | 1             | 1     |
| Rosin (Light)                 |                  | X     |        | 1        |       | 1                       | 1                            | 1             | 2     |

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|-----------------------------|------------------|-------|--------|----------|-------|-------------------------|------------------------------|---------------|-------|
| Shellac                     |                  | 2     |        | 2        |       | 1                       | 1                            | 1             | 1     |
| Sludge Acid                 |                  | X     |        |          |       | X                       | X                            | 3             | 2     |
| Soda Ash (Sodium Carbonate) | 1                | 2     |        | X        |       | 1                       | 1                            | 1             | 1     |
| Sodium Bicarbonate          | 3                | 1     |        | X        |       | 1                       | 1                            | 1             | 1     |
| Sodium Bisulfate            | X                | 3     |        | 3        |       | X                       | 1                            | 1             | 1     |
| Sodium Chloride             | 2                | 3     | 2      | X        | 1     | 3                       | 2                            | 1             | 1     |
| Sodium Cyanide              | 2                | X     |        | X        |       | 1                       | 1                            | 1             | 2     |
| Sodium Hydroxide            | 3                | X     | 3      | X        | X     | 2                       | 2                            | 2             | 1     |
| Sodium Hypochlorite         | X                | X     |        | X        |       | X                       | 3                            | 2             | 3     |
| Sodium Metaphosphate        | X                | 3     |        | 1        |       | 2                       | 1                            | 1             | 1     |
| Sodium Nitrate              | 1                | 3     |        | 1        |       | 1                       | 1                            | 1             | 1     |
| Sodium Perborate            | 3                | 3     |        | 1        |       | 1                       | 1                            | 1             | 1     |
| Sodium Peroxide             | 3                | 3     |        | 1        |       | 1                       | 1                            | 1             | 1     |
| Sodium Phosphate (Alkaline) |                  | 3     |        |          |       | 1                       | 1                            | 1             | 1     |
| Sodium Phosphate (Neutral)  |                  | 2     |        |          |       | 1                       | 1                            | 1             | 1     |
| Sodium Phosphate (Acid)     |                  | 2     |        |          |       | X                       | 2                            | 1             | 1     |
| Sodium Silicate             | 1                | 3     |        | X        |       | 1                       | 1                            | 1             | 1     |
| Sodium Sulfate              | 1                | 2     |        | 3        |       | 1                       | 1                            | 1             | 1     |
| Sodium Sulfide              | 1                | X     |        |          |       | 1                       | 1                            | 1             | 2     |
| Sodium Thiosulfate (Hypo)   | 3                | X     |        | X        |       | 1                       | 1                            | 1             | 2     |
| Stearic Acid                | 3                | 3     |        | 3        |       | 2                       | 2                            | 1             | 1     |
| Sulfate Liquors             |                  | X     |        |          |       | 1                       | 1                            | 1             | 2     |
| Sulfur                      | 2                | X     |        | 2        |       | 2                       | 2                            | 1             | 3     |
| Sulfur Chloride             | X                | X     |        |          |       | X                       | 3                            | 2             | 2     |
| Sulfur Dioxide (Dry)        | 2                | 1     |        | 1        |       | 1                       | 1                            | 1             | 1     |
| Sulfur Dioxide (Wet)        |                  | X     |        |          |       | X                       | 2                            | 1             | X     |
| Sulfuric Acid 10%           | X                | X     | 3      | 3        |       | X                       | X                            | 2             | 2     |
| Sulfuric Acid 10-75%        | X                | X     | X      | X        |       | X                       | X                            | X             | 2     |
| Sulfuric Acid 75-95%        | 3                | X     | X      | X        |       | 3                       | 3                            | 2             | 3     |
| Sulfuric Acid 95%           | 2                | X     | X      |          |       | 2                       | 2                            | 2             | X     |
| Surlfurous Acid             | X                | X     |        | X        |       | X                       | 3                            | 2             | X     |
| Tannic Acid                 | 3                | 3     | 1      | X        |       |                         | 1                            | 1             | 1     |
| Tar                         | 1                | 2     |        | 1        |       | 2                       | 1                            | 1             | 1     |
| Toluene, Toluol             | 1                | 1     |        | 1        |       | 1                       | 1                            | 1             | 1     |
| Trichlorethylene            | 3                | 1     |        | 3        |       | 1                       | 1                            | 1             | 1     |
| Turpentine                  |                  | 3     |        | 1        |       | 3                       | 1                            | 1             | 1     |
| Varnish                     | 2                | 2     |        |          |       | 1                       | 1                            | 1             | 1     |
| Vegetable Oils              | 1                | 2     |        | 1        |       | 1                       | 1                            | 1             | 1     |
| Vinegar                     | 3                | 3     |        | 3        |       | 3                       | 2                            | 1             | 2     |
| Water (Acid Mine Water)     | 3                | X     |        | 3        |       | 2                       | 1                            | 1             | 3     |
| Water (Fresh)               | 3                | 1     |        | 1        |       | 1                       | 1                            | 1             | 1     |
| Water (Salt)                | 3                | 3     | 2      | X        |       | 3                       | 2                            | 2             | 1     |
| Whiskey                     | X                | 2     |        |          |       | 3                       | 1                            | 1             | 2     |
| Wines                       | X                | 2     |        |          |       | 3                       | 1                            | 1             | 2     |
| Xylene, Xylol               | 2                | 1     |        | 1        |       | 1                       | 1                            | 1             | 1     |
| Zinc Chloride               | X                | X     |        | X        |       | 3                       | 2                            | 1             | 1     |
| Zinc Sulfate                | 3                | 3     |        | 3        |       | 3                       | 2                            | 1             | 1     |

TECHNICAL DATA

OIL & GASOLINE RESISTANCE

Rubber hose is used to convey petroleum products both in the crude and refined stages. The aromatic content of re-fined gasoline is often adjusted to control the octane rating. The presence of aromatic hydrocarbons in this fuel generally has a greater effect on rubber components than do aliphatic hydrocarbons. Aromatic materials in contact with rubber tend to soften it and reduce its physical properties. For long lasting service, the buyer of gasoline hose should inform the hose manufacturer of the aromatic content of the fuel to be handled so that the proper tube compound can be recommended for the specific application.

The effects of oil on rubber depend on a number of factors that include the type of rubber compound, the composition of the oil, the temperature and time of exposure. Rubber compounds can be classified as to their degree of oil resistance based on their physical properties after exposure to a standard test fluid. In this RMA classification, the rubber samples are immersed in IRM 903 oil at 100°C for 70 hours. (See ASTM Method D-471 for a detailed description of the oil and the testing procedure.) As a guide to the user of hose in contact with oil, the oil resistance classes and a corresponding description are listed.

PHYSICAL PROPERTIES AFTER EXPOSURE TO OIL:

|                |                                   | VOLUME CHANGE<br>MAXIMUM<br>+25% | TENSILE STRENGTH<br>RETAINED<br>80% |
|----------------|-----------------------------------|----------------------------------|-------------------------------------|
| <b>CLASS A</b> | (HIGH OIL RESISTANCE).....        |                                  |                                     |
| <b>CLASS B</b> | (MEDIUM/HIGH OIL RESISTANCE)..... | +65%                             | 50%                                 |
| <b>CLASS C</b> | (MEDIUM OIL RESISTANCE).....      | +100%                            | 40%                                 |

CHEMICAL RECOMMENDATIONS

The materials being handled by flexible rubber hose are constantly increasing in number and diversity. T o assist in the selection of the proper elastomer for the service conditions encountered, the following table has been prepared. The reader is cautioned that it is only a guide and should be used as such, as the degree of resistance of an elastomer with a particular fluid depends upon such variables as temperature, concentration, pressure, velocity of flow, duration of exposure, aeration, stability of the fluid, etc. Also variations in elastomer types and special compounding of stocks to meet specific service conditions have considerable influence on the results obtained. When in doubt, it is always ad-visable to test the tube compound under actual service conditions. If this is not practical, tests should be devised that simulate service condtions or the hose manufacturer contacted for Recommendations.

The following table lists the more commonly used materials, chemicals, solvents, oils, etc. The recommendation are based on room temperature and pressure conditions normally recommended for the particular type of hose being used. Where conditions beyond this can be met readily, they have been so indicated; where conditions are not normal and cannot be readily met, the hose manufacturer should always be consulted. The table does not imply conformance to the Food & Drug Administration requirements of Federal or State Laws when handling food products.

TABLE OF CHEMICAL, OIL & SOLVENT RESISTANCE OF HOSE:

**WARNING:** The following data has been compiled from generally available sources and should not be relied upon without consulting and following the hose manufacturer's specific chemical recommendations. Neglecting to do so might result in failure of the hose to fulfill its intended purpose, and may result in possible damage to property and serious bodily injury.

| RESISTANCE RATING  | RELASTOMERS/PLASTICS                      |   |
|--|---|---|
| <b>A</b> - Good Resistance, usually suitable for service.  | <b>NR</b> - Natural Rubber                | <b>EPDM</b> - Ethylene-propylene-diene-terpolymer |
| <b>F</b> - Fair Resistance, the chemical has some deteriorative effects, but the elastomer is still adequate for moderate service. | <b>IR</b> - Isoprene, synthetic           | <b>MQ</b> - Dimethyl-polysiloxane                 |
|  | <b>SBR</b> - Styrene-butadiene            | <b>FKM</b> - Fluoracarbon rubber                  |
| <b>C</b> - Depends on Condition, moderate service may be possible if chemical exposure is limited or infrequent.                   | <b>CR</b> -Chloroprene                    | <b>CM</b> - Chloro-polyethylene                   |
|  | <b>NBR</b> - Nitrile-butadiene            | <b>ECO/CO</b> - Ephichlorohydrin                  |
| <b>X</b> -Not recommended, unsuitable for service.   | <b>IIR</b> -Isobutene-isoprene            | <b>EXLPE</b> - Chloro-sulfonyl-polyethylene       |
| <b>I</b> - Insufficient Information, not enough data available at the time of publication to determine rating.                     | <b>CSM</b> - Chloro-sulfonyl-polyethylene |   |



## NOTES

[illegible]