RK DISTRIBUTING, INC.
1001 West Memorial Road • P.O. Box 20790 • Oklahoma City, OK 73156 • (405) 752-9619

Lorena S. Vaughn
Regional Hearing Clerk
U.S. Environmental Protection Agency
1445 Ross Avenue, Suite 1200 (6RC-D)
Dallas, TX 75202-2733

April 26, 2011

RE: RCRA-06-2011-5601;
Location: Ethio Mart 5200 S. I-35, OKC, OK 73129

Response to: III. GENERAL ALLEGATIONS

8. Agree
9. Agree
10. Agree
11. Agree
12. Agree
13. Agree; this is why we chose the product DevMat 111 which was installed according to the manufacturer's specifications by Advanced Sandblasting. See attached Advanced Sandblasting letter.
    This product has been through extensive testing with ASTM, a nationally recognized association and is the largest independent testing laboratory in the world. See attached AkzoNobel letter from Ron Brinsfield, NACE Coatings Inspector Certified-Level III #18463.
    Therefore; the installation of DevMat 111 according to manufacturer's specifications follows 40 CFR 280.33 and OCC 165:25-5-2.
    See attached DevMat 111 ASTM Performance Data sheet.

14. Agree; see 13 above. "Interior lining must be conducted in accordance with a code of practice developed by a nationally recognized association or an independent testing laboratory". When following the manufacturer's guidelines and specifications, the installation of DevMat 111 has been tested by ASTM standards for use in lining storage tanks.

These ASTM test standards met include: ASTM D 4060, ASTM D 4541, ASTM D 522, ASTM D 4585, ASTM D 2794, ASTM E 96, ASTM D 3363, ASTM D 2379, ASTM D 2370, ASTM D 790 AND ASTM D 2240. See attached Devoe High Performance Coatings Performance Data sheet and Chemical Resistance Guide.

15. Disagree; according 40 CFR 280.33, Note: The following codes and standards may be used: API 1631 and NLPA 631. These codes and standards are not the only nationally recognized association standards that must be used when repairing a tank. See 18 below.
Advanced Sandblasting and Coating followed the manufacturer's specifications for installing DevMat 111 which specifies 2 coats of 10 mil each. This specification underwent extensive testing and is approved by ASTM. See Advanced Sandblasting letter, AkzoNobel letter and DevMat 111 specification data sheet.

    I have never been in the business of lining tanks and was never aware that all nationally recognized standards for tank lining required 125 millimeters, with a minimum of 100 millimeters. I am aware that the state and federal requirements insert the word "may" to using these standards when repairing tanks.

16. Disagree; During the EPA Inspection at the above listed facility the Respondent did not provide a pamphlet to the inspector describing the application of the liner at this thickness. However; my opinions which should be considered hearsay and pamphlet were obtained from Respondent during a different inspection at a different location not owned by RK Distributing where my presence was requested. The pamphlet I provided was a DevMat 111 product specification sheet which clearly states recommended film thickness and performance data tested by ASTM.

17. Disagree; I have never measured the coating of any tank and do not have any first hand knowledge of the coating thicknesses installed at the above listed facility or any others. That being said, any opinions given by myself about internal tank coating thicknesses are unfounded and should not be used against me or any other station owner. I do have a statement from the coating company that I provided in my response dated February 4, 2011 which stated "at the time of installation, I followed the EPA and OCC guidelines for the internal lining of tanks" and that the tank in question was "in excellent condition and needed no repairs of any kind". See attached Advanced Sandblasting letter.

18. Disagree; For the above listed reasons and for the following State and Federal requirements for repairing UST systems:

Okla. Admin. Code 165:25-5-2 (4) the following codes and standards **may** be used to comply with 165:25-5-2: API 1631, API 1632, NLPA 631, and NACE RP-02-85
40 CFR 280.33 Repairs allowed. [*Note*: The following codes and standards **may** be used to comply with paragraph (a) of this section: National Fire Protection Association Standard 30, "Flammable and Combustible Liquids Code"; American Petroleum Institute Publication 2200, "Repairing Crude Oil, Liquefied Petroleum Gas, and Product Pipelines"; American Petroleum Institute Publication 1631, "Recommended Practice for the Interior Lining of Existing Steel Underground Storage Tanks"; and National Leak Prevention Association Standard 631, "Spill Prevention, Minimum 10 Year Life Extension of Existing Steel Underground Tanks by Lining Without the Addition of Cathodic Protection."]
There were no repairs to the tank of any kind as previously stated by the tank coating company, therefore; these listed codes and standards would not apply. Also the codes and standards (API 1631and NLPA 631) referenced in this Administrative Complaint are listed above as **may** be used, not must be used. Advanced Sandblasting followed the manufacturer's guidelines and specifications when applying their product DevMat 111 which underwent extensive testing by ASTM.

19. Disagree;
    a. The tank in question at the above listed facility has never leaked nor has it ever been repaired.
    b. The principal of this complaint is solely based on 2 standards; API 1631 and NLPA 631 and according to 40 CFR 280.33 may be used, not must be used.
    c. The coating installed in the tank, DevMat 111 has been through nationally recognized independent laboratory tests performed by ASTM. ASTM is the largest independent testing laboratory in the world. The coating company installed the product by following the manufacturer's guidelines and specifications.
    d. The tank has always passed all required tank tests and is currently passing .1 gph daily tank tests. The tank has never and will never pose any potential harm to the environment because of this and for another reason that the product level has always been below the outside tank pit water table (tank has always been surrounded by and covered in water). The only release that would occur if the tank failed would be water ingress into the tank.

Therefore; since the coating was installed by following the manufacturer's specifications and guidelines which was tested by ASTM and for this and all the other reasons listed above, any penalty for a potential release is not warranted.

FYI,

The company I work for has always been at the forefront of companies when working with the compliance dept. of the Oklahoma Corporation Commission. We strive to keep and maintain our compliance records the most complete and up-to-date at all times. When an inspection problem arises, we do our best to correct the problem same day or within a 24 hour time-frame. "We do the right thing" has always been our motto. If you have any doubt just call and ask any fuel inspector that we work with.
Oklahoma City area Fuel Inspectors: (NW Larry Brown 405-203-1690, NE Marion Bass 405-850-5907, SW Justin Lankford 405-203-1699, SE Phillip Crawford 405-203-1707, W Tom Murray 405-203-1693)

The coating company we hired, Advanced Sandblasting, started working in the 1980's for Armor Shield and has performed hundreds if not thousands of internal tank coatings over the years. Prior to the 1998 deadline, I am aware that on multiple locations in the metro, the OCC compliance division inspected, watched, observed and approved of the DevMat 111 coating and procedures performed by Advanced Sandblasting. I feel I have done nothing but my best to comply with all requirements given to our company and truly believe that the Complaint given to our company is not warranted. I would like to request a motion to dismiss this Administrative Complaint based on the facts presented above which include attachments from AkzoNoble, Devoe Coatings and Willie Gravitt with Advanced Sandblasting.

If so needed, I would like to request a hearing and/or a settlement conference to contest this Administrative Complaint.

Sincerely

Steven B. Hanska
RK Distributing, Inc

Attached: AkzoNobel Ron Brinsfield letter, AkzoNobel David Maurer letter, Advanced Sandblasting Willie Gravitt letter, DevMat 111 specification sheet, DevMat 111 Performance Data Sheet, Chemical Resistance Guide ICI/Devoe High Performance Coatings

Cc: Jay Przyborski, EPA Region 6. Sent all certified mail receipt requested.

AkzoNobel
Tomorrow's Answers Today

Mr. Steve Hanska
R.K. Distributing Inc.
1001 W. Memorial Rd
Oklahoma City, OK 73156

RE: Devoe Coatings DevMat DC111 Tank Lining

Mr. Hanska,

Thank You for your recent inquiry into the ability of Devoe Coatings DevMat DC111 Tank Lining to meet the Environmental Protection Agency's (EPA) and the Oklahoma Corporation Commission's standards for storage of gasoline in an underground steel storage tank.

The EPA 40 CFR 280.33 standard states "repairs to UST systems must be properly conducted in accordance with a code of practice developed by a nationally recognized association or an independent testing laboratory." DevMat DC111 has been tested in many categories (Performance Data Sheet included under separate cover) by ASTM International, www.astm.org, a Nationally and Internationally recognized independent laboratory, those categories including Adhesion, Moisture Permeability and Flexural Strength. Our recommended system for containment of motor vehicle fuels is (2) 10 mil coats of DevMat DC111 over a SSPC-SP10 Near White blasted steel surface. Further, EPA 40 CFR 280.32 states that "Owners and operators must use an UST system made of or lined with materials that are compatible with the substances stored in the UST system". This system is suitable for immersion service of gasoline. I have also attached under separate cover a Chemical Resistance guide that lists completely all chemical substances that we have tested against DevMat DC111. As well as the Technical Data Sheet for the product that includes proper preparation, application and handling of our material.

The rule from the Oklahoma Corporation Commission that applies here (165:25-5-2 Tank upgrading requirements) would also deal with the same "nationally recognized association or an independent testing laboratory" ASTM International.

Thank You,
Ron Brinsfield
Akzo Nobel Paints LLC
NACE Coatings Inspector Certified-Level III #18463

International Paint LLC
Protective Coatings
Marketing

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Strongsville, OH
44136
USA

T +440 297-8664
F +440 297-8539
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AkzoNobel
Tomorrow's Answers Today

March 11, 2011

Re. Devoe High Performance Coatings Corporate Identity for Specifications

Dear Sir:

This memo is to clarify the identity of the company which owns the assets and intellectual property of the Devoe High Performance Coatings brand contained in this proposal for specification or bid. Devoe High Performance Coatings was previously owned by ICI Paints, North America.

ICI Paints was acquired by world coatings leader AkzoNobel in January of 2008. Thereafter, the use of the ICI Paints name in bids and specifications, as well as all forms of corporate communication, began phasing out. While significant progress has been made, this process of phase-out is ongoing.

In early 2009, AkzoNobel announced that Devoe High Performance Coatings would integrate with another AkzoNobel business unit, International Paint Protective Coatings. Both brands are considered industry leaders in protective coatings, linings and fire-protection products. The integration has resulted in expanded positions for both of these protective coatings brands and enhanced customer service throughout North America. Key integration activities have largely been completed including company identification transformation. The recently reintroduced Devoe HPC product data sheet format illustrates the new corporate affiliation.

The International Paint Protective Coatings and Devoe High Performance Coatings integration project represented a significant investment by AkzoNobel to leverage innovative product technologies and customer-focused services in order to provide leadership to the changing dynamics of the coatings industry, while pro-actively addressing the asset protection challenges of the customers they serve.

The product offer of the Devoe High Performance Coatings brand remains essentially unchanged. Devoe HPC products can be obtained through an extensive network of Glidden Professional™ Paint Centers (US), Dulux paint stores (Canada) and selected independent paint dealers and distributors.

For further information about the International Paint full range of high-performance protective coatings, linings and fire-protection products, please visit www.international-pc.com. For Devoe High Peformance Coatings information, please visit http://www.international-pc.com/products/Pages/DevoeProductRange.aspx The Devoe HPC Technical support phone number is 1 888-338-6347.

Thank you for continuing to specify and purchase Devoe High Performance Coatings.

Sincerely,

David W. Maurer

David W. Maurer
Marketing Manager, North American Protective Coatings

International

AS ADVANCED SANDBLASTING

108 N.E. 51ST, OKLAHOMA CITY, OK 73049 (405) 525-7263

4/20/11
To Whom It May Concern:

I am the owner of Advance Sandblasting. I was recently asked about the coating process I performed for RK at a location at 5220 S. I-35, Oklahoma City. I recall that the tank was the west unleaded tank and that the tank was in exceptional condition and required no repairs of any kind. The coating I used was Devmat 111. This product is made by ICI Devoe coatings. I installed the coating according to the manufacturer's specifications and guidelines. This is the only coating that I am aware of that is a high grade, high quality, 100% solids product. I have been using this coating on many applications including Frac tanks, above-ground tanks and of course underground fuel tanks for the last twenty-five or so years.

Sincerely,

Willie Gravitt
Advance Sandblasting

DEVOE HIGH PERFORMANCE COATINGS

DEVMAT® 111
100% Solids Epoxy Tank Coating
Performance Data

Effective Date 2/22/10

Property	Method	Result
Abrasion Resistance	ASTM D 4060, CS-17, 2000 gram load, 1000 cycles	221 mg loss
Adhesion	ASTM D 4541	900-1100 psi
Elongation	ASTM D 522, Method A	1.72%
Humidity Resistance	ASTM D 4585, 1000 hours	No effect on film integrity or adhesion. Less than 1/32 inch rust creepage at scribe and and less than 0.5% rusting at edges.
Impact Resistance	ASTM D 2794	50 inch-pounds
Moisture Permeability	ASTM E 96	0.7 perms
Pencil Hardness	ASTM D 3363	6H
Tensile Strength	ASTM D 2379	2755 psi
Modulus	ASTM D 2370	225,900 psi
Flexural Strength (Yield Strength)	ASTM D 790	4819 psi
Hardness (Durometer)	ASTM D 2240 (Type D)	79

All coatings or coatings systems are cured for seven days at 77°F prior to testing.

(8/03)
Ad Stock #68702C

DEVMAT® 111

100% Solids Epoxy Novolac Tank Coating

Cat. # 111KXXXX

PRODUCT DESCRIPTION

Generic: Two-Component Epoxy Novolac

General Description: A two-component,100% solids, epoxy tank lining with outstanding solvent and chemical resistance. It has excellent wetting of glass mat and chopped glass fiber and may be applied up to 1/2" thick on horizontal surfaces.

Typical Uses: DEVMAT 111 Coating can be used for lining storage tanks containing strong solvents, like toluene and xylene. Also for repair or line storage tank bottoms, floating roofs or fixed roofs and rebuilding pitted steel surfaces.

FEATURES

Advantages:

- Excellent chemical, solvent and water immersion resistance.*
- Resistant to aromatic solvents including xylene, toluene, and all gasolines, including all super unleaded grades*, methyl tertiary-butyl ether and caustic solutions.
- May be applied using conventional airless equipment.
- Ideal for secondary containment.

Limitations of Use: * See DEVMAT Tank Lining System Chemical Resistance Table for complete listing. Exterior exposure will cause color change, early dulling and loss of gloss, but this does not affect the protective properties of the coating.

SPECIFICATION DATA

Color: #3 Buff (111K1475), #3 Mist Gray (111K2370)
Finish: High Gloss
Reduction Solvent: Not normally required
Clean-up Solvent: T-10 Thinner
Weight/Gallon: 14.74 lbs./gal. (1.77 kg/L)
VOC (EPA 24)**:** 0.6 lbs./gal. (72.2 g/L)
Solids By Volume: 100% - Calculated
Theoretical Coverage at 1.0 Mil (25 microns) **Dry:** 1604 sq. ft./gal. (39.3 m²/L)
Recommended Film Thickness: Two coats each 10 mils (250 microns) dry - 10 mils (250 microns) wet
Systems: Please consult the appropriate system guide, the particular job specification or your ICI Paints' Representative for proper systems using this product. Systems must be selected considering the particular environment involved.
Minimum Dry Time (ASTM D 1640)**:** At 10 mils (250 microns) DFT

Substrate Temperature	50°F(10°C)	70°F(21°C)	80°F(27°C)
To Recoat	25 hours	14 hours	10 hours
Dry Hard	>32 hours	22 hours	18 hours
Maximum Self Recoat	3 days	3 days	3 days

Ventilation, film thickness, humidity, thinning, and other factors can influence the rate of dry.

Warning: The above table provides general guidelines only. Always consult your ICI Paints' Representative for appropriate recoat windows since the maximum aged recoat time of this product may be significantly shortened or lengthened by a variety of conditions, including, but not limited to humidity, surface temperature, and the use of additives or thinners. The use of accelerators or force curing may shorten the aged recoat of individual coatings. The above recoat windows may not apply if recoating with a product other than those listed above. If the maximum aged recoat window is exceeded, please consult your ICI Paints' Representative for appropriate recommendations to enhance adhesion. Failure to observe these precautions may result in intercoat delamination.

Shelf Life: Over 24 months at 77°F (25°C) – unopened
Mix Ratio By Volume: 3 (base): 1 (converter) – see mixing instructions.
Induction: None
Pot Life: 1.45 hours @ 77°F (25°C) & 50% R.H.

PERFORMANCE DATA

Adhesion: (ASTM D 4541) – Excellent
Abrasion Resistance: (ASTM D 4060) – Excellent
Humidity Resistance: (ASTM D 4585) – Excellent
Service Temperature Limits: 250°F (121°C) dry
Hardness: (ASTM D 3363, 7 day cure @ 77°F (25°C) 6H

9 FINISHES | HIGH PERFORMANCE COATINGS (09960)

09960

GENERAL SURFACE PREPARATION

All surfaces must be sound, dry, clean, free of oil, grease, dirt, mildew, form release agents, curing compounds, loose and flaking paint and other foreign substances.

New Surfaces: Steel DEVMAT® 111 Coating may be applied directly to abrasive blasted steel or over a suitable primer. In either case, the steel surface must be blasted to near-white metal, equivalent to SSPC-SP10 or ISO-Sa2½, and have a minimum profile of 2 mils (50 microns). Primed surfaces must be clean free of water, dirt, grit and other contamination prior to application of DEVMAT 111 Coating.

Concrete Floors, Poured Concrete – Cure at least 30 days, abrasive blast or acid etch slick, glazed concrete or concrete with laitance. Prime with PRE-PRIME™ 167 or this coating.

DIRECTIONS FOR USE

Tinting: Do not tint.

Thinning: Thinning is not normally required, however, depending on local VOC and air quality regulations, up to 5% reduction with T-10 Thinner may be utilized to enhance spray pattern or to improve wetting of fibers.

Mixing: DEVMAT 111 Coating is a two-component product supplied in 4 gallon or 1 gallon kits which contain the proper ratio of ingredients. The entire contents of each container must be mixed together. Mix the base portion slowly for several minutes. After mixing the base portion, add the converter slowly with continued agitation. After the converter add is complete, continue to mix slowly until the system is homogeneous. Avoid storing or placing containers in direct sunlight.

Application: Optimum application properties and working life of the coating are obtained when the mixed components are at 77°F (25°C). Minimum application surface temperature is 50°F (10°C). At extreme temperatures, efforts should be made to maintain mixed material at 77°F (25°C). At temperatures above 77°F (25°C), pot life will be dramatically shortened and plural component equipment should be considered.

Where airless equipment is used, a 45 to 1 pump or larger and .023" to .029" tip size will provide a good spray pattern. Ideally, fluid hoses should not be less than 3/8" ID and not longer than 50 feet to obtain optimum results. Any plural component application requires volumetric check of the mix ratio. DEVMAT 111 Coating can also be applied with a spreader, squeegee or roller. Brushing and rolling may require multiple coats to achieve correct film thickness and/or hiding.

A minimum of seven days cure with ventilation at temperatures above 77°F (25°C) should be allowed before tank linings are put into service. Longer curing times with ventilation are required if temperatures are lower than 77°F (25°C). Do not allow coating to remain in the application equipment longer than 1.45 hours. Flush out all application equipment whenever there is a delay in application.

Ventilation: Although DEVMAT 111 Coating is solventless, good ventilation with dry air is required for the protection of the applicator, to prevent condensation and to obtain proper coating performance. Ventilation should be maintained throughout the cure period. Be sure the air in the lowest areas is constantly replaced with fresh, dry air.

Dry Time: At 70°F (21°C) & 50% R.H., dries to recoat 14 hours.

Clean-up: Use T-10 Thinner.

PRECAUTIONS

WARNING! CORROSIVE. CAUSES EYE AND SKIN BURNS. HARMFUL OR FATAL IF SWALLOWED. ASPIRATION HAZARD-CAN ENTER LUNGS AND CAUSE DAMAGE. HARMFUL IF INHALED. MAY CAUSE CENTRAL NERVOUS SYSTEM EFFECTS, INCLUDING DIZZINESS, HEADACHE OR NAUSEA. CAUSES RESPIRATORY TRACT IRRITATION. MAY CAUSE ALLERGIC SKIN AND RESPIRATORY REACTION. OVEREXPOSURE MAY CAUSE LUNG DAMAGE. CONTAINS CRYSTALLINE SILICA WHICH CAN CAUSE LUNG CANCER AND OTHER LUNG DAMAGE IF INHALED. USE ONLY WITH ADEQUATE VENTILATION. KEEP OUT OF THE REACH OF CHILDREN. NOTICE: Products in this series contain solvents. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. For emergency information call (800) 545-2643. **Note: These warnings encompass the product series. Prior to use, read and follow product-specific MSDS and label information.** If sanding is done, wear a dust mask to avoid breathing of sanding dust. Do not breathe vapors or spray mist. Ensure fresh air entry during application and drying. Avoid contact with eyes and skin. If you experience eye watering, headaches, or dizziness, leave the area. If properly used, a respirator may offer additional protection. Obtain professional advice before using. Close container after each use. **FIRST AID:** In case of skin contact, wash **thoroughly** with soap and water. If any product remains, gently rub petroleum jelly, vegetable or mineral/baby oil onto skin, then wash again with soap and water. Repeated applications may be needed. Remove contaminated clothing. For eye contact, flush **immediately** with large amounts of water, for at least 15 minutes. **Obtain emergency medical treatment.** If swallowed, **obtain medical treatment immediately.** If inhalation causes physical discomfort, remove to fresh air. If discomfort persists or any breathing difficulty occurs, **get medical help. KEEP FROM FREEZING.** 05244-1003

SHIPPING

Flash Point: 200°F (93°C)

Packaging: 1 gallon kit (3.785L)
0.75 gallon base
0.25 gallon converter

4 gallon kit (15.14L)
3.0 gallon base
1.0 gallon converter

Shipping Weight: 4 - 1 gallon kits - 70 lbs. (31.8 kg)
4 gallon kit - 64 lbs. (29.0 kg)

111KXXXX (05/06)
Ad Stock #68629C

DEVOE HIGH PERFORMANCE COATINGS
ICI Paints
Strongsville,
Ohio, U.S.A.
800-654-2616
www.devoecoatings.com

CHEMICAL RESISTANCE GUIDE

Chemical Resistance Guide
For Tank Lining & Secondary Containment

ICI DEVOE HIGH PERFORMANCE COATINGS

ICI Devoe Coatings

Chemical Resistance Guide
For
Tank Lining and Secondary Containment

Devmat 111 System
Devran 124 System
Devchem 253 System
Devchem 257 System
Catha-Coat 305 System

This guide contains a listing of many of the chemicals and products that are stored in bulk quantities and a resistance rating for the systems listed above. The indicated resistance ratings are based on laboratory testing, actual field experience and other studies believed by ICI Devoe Coatings to be reliable. Please consult the appropriate system guide, the particular job specification or an ICI Devoe Coatings' Industrial Coatings Specialist for proper systems using these linings. Systems must be selected considering the particular environment involved.

Since many of the commercial products mentioned in this guide may vary in composition or their product specifications may change, ICI Devoe Coatings cannot assume responsibility for the condition of the linings or products stored in tanks. The listed resistance ratings are based solely on the effect of the particular chemical or product on the lining itself. ICI Devoe Coatings has not determined the effect of linings on stored products nor have the effects of contaminated products on linings been determined.

ICI Devoe Coatings conducts an ongoing research and lining testing program. If there are chemicals, products or special conditions not found in this guide please contact an ICI Devoe Coatings representative.

ICI Devoe Coatings reserves the right to change this resistance guide without notice. It is the responsibility of the user of this guide to ensure that current, up to date information is obtained before specifying a tank lining system.

General Remarks On Lining Systems

Before using the attached chemical resistance guide the following comments should be thoroughly read and understood. Failure to do so may result in decreased chemical resistance and service life.

Surface Preparation – Application – Cure

Sophisticated chemically resistant tank linings require the best surface preparation, application and cure to ensure expected performance and service life. All ICI Devoe Coatings lining systems must be applied directly to a properly prepared substrate. All shop or pre-construction primers must be completely removed prior to any lining application.

Generally speaking, when applied to steel ICI Devoe Coatings ' linings must be applied directly to a minimum SSPC SP-10 (ISO Sa 2_) near white metal blast with an acceptable surface profile. ICI Devoe Coatings recommends that concrete be prepared in accordance with ASTM D 4258, "Standard Practice for Abrading Concrete" with abrasive blast cleaning being the preferred method of surface preparation.

Application of tank linings and secondary containment coatings is extremely critical and must be first rate in all respects. Sophisticated linings should be applied by knowledgeable and professional applicators. Ventilation and film thickness control are very important. Refer to the appropriate product data sheets for maximum acceptable dry film thickness requirements.

Proper ventilation during application and cure of sophisticated tank and secondary containment linings is absolutely critical. Ventilation should be forced (mechanical) in nature and must be configured to exhaust heavier than air solvent vapors from the lowest area. Improper ventilation during application and final cure will adversely affect the performance and service life of the coating system. Ventilation must continue throughout final cure.

The normal final cure requirement for any lining or secondary containment system prior to service is seven days at 77°F (25°C). Lower temperatures may require longer cure time before service. Force cure schedules are available for several chemically resistant systems. Please contact ICI Devoe Coatings for guidance.

Please refer to the appropriate product data sheets for specific details concerning minimum surface preparation requirements, required surface profile, recommended application methods, equipment and cure requirements.

Storage Of Chemicals And Products

Resistance ratings are based upon storage periods longer than six months unless otherwise stated. See "Notes Limiting Immersion Service" in the attached guide and resistance ratings for specific chemicals or products.

All resistance ratings for low viscosity materials that do not require heating for transfer assume a maximum storage temperature of 120°F (49°C). For those materials that must be heated to facilitate transfer the maximum storage temperature is assumed to be 180°F (82°). Material transferred or stored in excess of these temperatures may be detrimental to the lining system. ICI Devoe Coatings must be consulted prior to storage of any material in excess of the above mentioned maximum temperatures.

Due to the large number of possible combinations of product storage sequences, it is impossible to predict overall system chemical resistance in practice. Most sequence problems can be avoided by using common sense and employing proper ventilation and cleaning between storage of chemical or products. Non-aggressive products generically similar such as fuels and lubrication oils should not normally cause sequence problems.

Some chemicals or products may stain or discolor lining systems and may be difficult to clean. Delays in filling such tanks may be encountered until it can be determined that the stains or discoloration cannot be removed by cleaning.

Contamination Of Stored Chemicals And Products

Contamination of stored chemicals and products by lining systems is highly unlikely and is usually limited to initial storage after installation of the lining system. Avoid storing high purity materials before the system is fully cured.

Contamination may also result from improper cleaning between storage materials.

ICI Devoe Coatings has no control over filling, discharge and cleaning of storage materials and is therefore not responsible for cargo contamination.

Cleaning Of Tank And Secondary Containment Coatings

Special care must be exercised when cleaning tank and secondary containment coatings. Cleaning agents and methods must be chosen so as not to damage the coating system. If a coating system is soft from product storage it may be subject to mechanical damage during the cleaning process if not allowed time to recover its original resistance properties. Usually proper forced ventilation will allow a coating system to recover prior to cleaning.

Zinc Tank Linings

Catha-Coat 305 is an inorganic zinc tank lining and is therefore sensitive to high and low pH aqueous chemicals or products. Generally the pH of a product to be stored in a Catha-Coat 305 lined tank must fall in the range of 5.5-10.0. Storage of material outside this pH range may cause damage to or destroy the Catha-Coat 305 lining.

Any material stored in an inorganic zinc rich coating lined tank is subject to slight zinc pick up or contamination. Catha-Coat 305 is no exception. Never store a chemical or product in zinc lined tanks if slight zinc contamination of the stored material is not acceptable.

Practical Field Testing

Due to the wide variation in the composition of chemicals and products, prudent engineering practice may indicate field testing of the coating system prior to large scale application and use.

Direct Food Contact

The coatings listed in this guide have not been evaluated for direct food contact.

Chemicals And Products Not Included In This Guide

An ICI Devoe Coatings representative must be consulted for resistance ratings for chemicals or products not included in this guide. Failure to do so may result in the failure of the lining system. ICI Devoe Coatings is not responsible for lining failures when the lining is exposed to chemicals or products that have not been tested or approved by ICI Devoe Coatings.

Key to Resistance Guide

S	**Suitable For Immersion and Secondary Containment**
SC*	**Suitable For Secondary Containment**
U	**Unsuitable For Immersion And Secondary Containment**
USC	**Unsuitable For Secondary Containment**
#1, 2, 3...	**Suitable for immersion but limited in accordance with the particular note**
L30	**Immersion Limited To 30 Days Maximum But Suitable For Secondary Containment**
L60	**Immersion Limited To 60 Days Maximum But Suitable For Secondary Containment**
Blank	**Not Tested Therefore No Data Available**

* Resistant to immersion in chemical or product for at least 72 hours.

Notes Limiting Immersion Service

1 These chemicals will cause some softening of the coatings system leading to reduced mechanical resistance. These chemicals must not be stored in newly lined tanks before the coating system is fully cured.

No #1, L30 or L60 chemical may be stored in any tank until the coating system is **fully cured**. Full cure will be reached after a service period of thirty days with a suitable (S notation) product. Full cure may also be achieved by the storage of hot products such as lubricating oil, mineral oil, vegetable oils and animal oils for a period of at least four days at 120°F (49°C) or three days at 140°F (60°C).

After storage of #1, L30 and L60 products, the coating system must be allowed to fully recover to its original resistance condition. For the coating to recover the tank must be forced-air ventilated for at least twenty-four hours or longer if the coating system has not recovered. The next product stored must be a suitable (S notation) chemical for at least ten days prior to the reintroduction of a #1, L30 or L60 product.

Under no circumstances should water be introduced into the tank before ventilation and the suitable product introduced after ventilation must not contain water.

2 Catha-Coat 305 may be safely used to store sweet crude oil. Sour crude oil is acidic in nature and will attack zinc and is not recommended. Crude oil with a hydrogen sulfide content in excess of 0.033% (330 ppm) or a neutralization number greater than 0.4 are considered unsatisfactory.

3 Animal and vegetable fats and oils contain variable amounts of free fatty acids. Before acceptable for storage the free fatty acid content of these products must be 2.5% (25,000 ppm) or less and the acid number limitation is 5.0 or less.

Free fatty acid content of a product may increase on aging or moisture contamination. Elevated storage temperature also increases free fatty acid content especially for lard and tallow. It is advisable to check the pH of such materials before storage in Catha-Coat 305 lined tanks. A pH range of 5.5 to 10.0 is acceptable.

4 Certain types of chemicals may react with water to produce aggressive acidic by-products that may adversely affect tank linings. Esters and chlorinated compounds must be stabilized and be kept free of moisture contamination. The water content must be limited to 0.01% (100ppm) and the storage temperature must not exceed 100°F (38°C).

5 Phenol (carbolic acid) and phenol derivatives may form by-products when exposed to oxygen, sunlight or trace alkalies that may stain the lining. An inert gas blanket may reduce the chance of staining.

6 Certain chemicals, crude chemicals and carbon containing materials may stain the lining. Cleaning may be very difficult if not impossible. Staining of products subsequently stored can not be generalized.

7 The linings are resistant and inert to these chemicals. If these chemicals are not properly stabilized, contain a foreign contaminant or if heat limitations are exceeded, there is the possibility of polymerization or decomposition. Any stabilizing agents must be compatible with the lining.

8 Products like coal tar and xylenol may vary in composition from one grade to another or even batch to batch. Samples of the specific material should be tested or evaluated prior to introduction into the lined tank.

9 These products are believed to be suitable for storage in the indicated tank lining since they seem to be generically similar to products successfully stored. No confirming tests have been conducted.

10 Methanol and the following chemicals – acetone, cyclohexanone, ethylene dichloride, or vinyl acetate monomer must never be sequenced more than once without prior approval from ICI Devoe Coatings.

Methanol must not contain more than 0.1% (1000 ppm) of water.

Methanol and ethanol storage is a critical exposure for these tank linings. ICI Devoe Coatings recommends that filling and discharge retains of both of these alcohols be sampled and kept for a period of at least one year. The containers must be kept closed tightly and moisture free.

11 Organic fatty acids hydrolyze in the presence of water to form very aggressive acidic by-products. Products such as tall oil fatty acid, palm oil fatty acid, etc. must be kept stabilized and moisture free. The water content must be limited to 1% (10,000 ppm). No traces of inorganic (mineral) acids are allowed.

Chemical	Devmat 111	Devran 124	Devchem 253	Devchem 257	Cama-Coat 305
Acetaldehyde	U	USC	U	U	U
Acetic acid 5%, 10%, 50%	U	SC	U	U	U
Acetic anhydride	U	USC	U	U	S
Acetone	U	SC	1, 10, L30	U	U
Acetone cyanohydrin					4
Acetonitrile		SC	1, 4, L60		
Acetophenone (Phenyl methyl ketone)	U	SC	6, L60	U	S
Acetylene, gas	S	SC	S	S	S
Acetylene dichloride (Dichloroethylene)	U	USC	SC	U	4
Acrolein	U	USC	U	U	U
Acropol (Mixed linear alcohols)	S	SC	S	S	S
Acrylic acid		SC	1, 4, L30		U
Acrylic monomers	U	USC	U	U	4
Acrylonitrile	U	USC	U	U	7
Acrylonitrile-styrene copolymer dispersion (in polyether polyol)			9		
Adiponitrile	U	USC	U	U	
Aircraft gasoline	S	SC	S	S	S
Airturbo fuel	S	SC	S	S	S
Alcohol, linear primary C-12/15	S	SC	S	S	S
Alimet (Temperature limited to 95°F/35°C)	U	USC	1, L30	U	U
Alcohol ethoxylate, linear primary	S	SC	S	S	S
Alcohol ethoxylate, ammonium salt solution		SC	S		S
Alcohol ethoxysulfate, sodium salt solution		SC	S		S
Alcoholic Beverages, NOS	SC	SC	U	U	U
Aldol	U	USC	U	U	U
Alkalate	9	SC	9	9	9
Alkali soybean oil	S	SC	S	S	3
Alkane (Dodecyl benzene)	S	SC	S	S	S
Alkyl benzene	S	SC	S	S	S
Alkyl benzene sulfonic acid		SC	6		U
Alkyl phosphate		SC	8		
Alkyl phthalate		SC	4		
Alkylate bottom (Dodecyl benzene)	S	SC	S	S	S
Alkylate detergent	S	SC	S	S	S
Alkylate 22 (Dodecyl benzene)	S	SC	S	S	S
Alkylate 130 (Monsanto)	S	SC	S	S	S
Allyl alcohol		SC	S	U	S
Allyl aldehyde	U	USC	U	U	U
Allyl chloride (3-Chloroprene)	U	SC	4, L60	U	U
Almond oil, sweet		SC	S	S	S
Alpha olefins	S	SC	S	S	S
Alpha olefin C-6/7	S	SC	S	S	S
Alpha olefin C-7/8	S	SC	S	S	S
Alpha olefin C-7/14	S	SC	S	S	S
Alpha olefin C-10/15	S	SC	S	S	S
Alpha olefin C-15/18	S	SC	S	S	S
Alpha-hydroxytoluol (Benzyl alcohol)		SC	S	S	S
Alpha-n-amylene (1-Pentene)	S	SC	S	S	S
Alum solution 15%	S	SC	S	S	U
Alumina slurry concentrate	S	SC	S	S	U
Aluminum chloride 10%	S	SC	6	S	U
Aluminum chloride 30%	S	SC	6	S	U
Aluminum hydroxide dry	S	SC	S	S	U
Aluminum nitrate 30%	S	SC	S	S	U
Aluminum sulfate 10%	S	SC	S	S	U
Aluminum sulfate 30%	S	SC	S	S	U
Aluminum sulfide 100%	U	USC	U	U	U
Aminoethane (Ethylamine)	U	USC	U	U	U
Aminoethanolamine	U	USC	U	U	U
Aminoethoxy ethanol	U	USC	U	U	U
Aminoethyl ethanolamine	U	USC	U	U	U
Aminoethyl piperazine				U	

Chemical	Devmat 111	Devran 124	Devchem 253	Devchem 257	Catha-Coat 305
Aminoform (HMTA)	U	USC	U	U	U
2-Amino-2-methyl-1-propanol (90% or less)			S	U	
Ammonia, anhydrous	U	SC	U	U	U
Ammonia 26° Be' (< 25°C)	U	SC	1, L30		U
Ammonium 28% aqueous solution, ammonium hydroxide (< 25°C)	U	SC	1, L30		U
Ammonia fertilizer solutions	S	SC	S	S	U
Ammonia water 10% (not over 25°C)	U	SC	1, L30		U
Ammonium carbonate 50%		SC	S	1	U
Ammonium chloride, quarternary	SC	SC	L30	U	
Ammonium hydrogen phosphate solution		SC			
Ammonium hydroxide ammonia 28% aqueous solution (25°C)	SC	SC	L30		U
Ammonium hydroxide 10% solution in water	SC	SC	L60		U
Ammonium hydroxide 25% solution in water	SC	SC	L60		U
Ammonium nitrate 10% solution in water	SC	SC	S	S	U
Ammonium nitrate 30% solution in water	SC	SC	S	S	U
Ammonium nitrate 50% solution in Ammonium phosphate, urea solution	SC	SC	S	S	U
Ammonium phosphate solution		SC			
Ammonium sulfate 40% (no heat)	SC	SC	S		
Ammonium thiocyanate (<25%)					
Ammonium thiosulfate solution (<60%)					
Amyl acetate (iso, normal, secondary)	SC	SC	1, 4		4
Amyl alcohol (iso, normal, secondary and tertiary)	SC	SC	S	S	S
Amyl aldehyde		SC	U	U	U
Amyl carbinol (Hexanol)		SC	S	S	S
Amylene (1-Pentene)	S	SC	S	S	S
Amylene hydrate (Amyl alcohol)		SC	S	S	S
Amyl hydride (Pentane)	S	SC	S	S	S
Anchovy oil		SC	S	S	3
Anglanoil 99		SC	6	9	6
Anitine	U	SC	U	U	U
Animal oil		SC	S	S	3
Anivax SX 3158		SC	S		S
Ansulite FFF		SC	S		
Anthracene (C14) non-liquid		SC	S	S	S
Anthracene oil		SC	S	S	
Antifreeze (glycol-based)	S	SC	S	S	S
Apricot kernel oil		SC	S	S	
Arachis oil		SC	S	3	3
Arco carbon black oil (feed stock)		SC	S	S	S
Aroma (Extender oils)		SC	S	S	S
Aromatic 100	S	SC	S	S	S
Aromatic concentrate (carbon black/feed stock)		SC	S	S	S
Aromatic hydrocarbons		SC	S	S	S
Aromatic oils (Extender oils)	S	SC	S	S	S
Aromatic petroleum solvents	S	SC	S	S	S
Aromatic sulfonic acids		SC	U	U	U
Asphalt		SC	6		
Asphalt cut back (Mix-asphalt, gasoline, Naphtha and solvents)		SC	S	S	S
Atrazine		SC	S		U
Aviation alkylates (C8 paraffins and isoparaffins, BP 95-120°C)	S	SC	S	S	S
Aviation gasoline	S	SC	S	S	S
Aviation kerosene	S	SC	S	S	S
Avocado oil		SC	S	S	
Axle oil (lube oil)	S	SC	S	S	S
Babassu oil		SC	S	S	3
Beechnut oil		SC	S	S	3
Benzaldehyde	U	USC	U	U	U
Benzene	SC	SC	S	S	S
Benzene, industrial nitration grade	SC	SC	S	S	S

Chemical	Devmat 111	Devran 124	Devchem 253	Devchem 257	Cattle-Coat 305
Benzene, trimethyl	SC	SC	S	S	S
Benzenesulfonyl chloride		SC			
Benzol	SC	SC	S	S	S
Benzyl acetate		SC	1, 4	U	4
Benzyl alcohol	SC	SC	S	S	S
Benzyl chloride	SC	SC	S		
Beta-methacrylic acid	U	USC	U	U	U
Black oil		SC	S	S	4
Blandol (white mineral oil)	S	SC	S	S	S
Blown oils	S	SC	S	S	3
Boric acid 10%	SC	SC	S		U
Brake fluid (glycol base)	S	SC	S	S	S
Brake fluid (glycol ether base)	S	SC	S	S	U
Brandy	SC	SC	SC	SC	
Brine	S	SC	S	S	U
Bromine	U	USC	U	U	U
Bunker C oil and solvent	S	SC	S	S	S
Bunker oil	S	SC	S	S	S
Butadiene	U	USC	S	S	S
Butadiene, inhibited	U	USC	S	S	S
Butane	S	SC	S	S	S
1,3-Butanediol (Butylene glycol)	S	SC	S	S	S
Butanoic acid (Butyric acid)	U	USC	U	U	U
Butanol (iso, normal, secondary and tertiary)	SC	SC	S	S	S
Butene oligomer	S	SC	S	S	S
Butenoic acid (Crotonic acid)	U	USC	U	U	U
2-Butoxy ethanol (Butyl cellosolve)		SC	S	S	S
Butyl acetate (iso, normal, secondary)	SC	SC	1, 4	U	4
Butyl acrylate (inhibited)		SC	4	U	4
Butyl alcohol (iso, normal, secondary, tertiary)	SC	SC	S	S	S
Butyl amines	U	USC	U	U	U
Butyl benzyl phthalate (BBP)		SC	S	4	4
n-Butyl butyrate		SC	4	4	4
Butyl carbinol (n-Amyl alcohol)		SC	S	S	S
Butyl carbitol (Diethylene glycol monobutyl ether)	SC	SC	S	S	S
Butyl carbitol acetate (Diethylene glycol monobutyl ether acetate)		SC	1, 4	U	4
Butyl cellosolve (Ethylene glycol monobutyl ether)		SC	S	U	S
Butyl cellosolve acetate (Ethylene glycol monobutyl ether acetate)		SC	1, 4	U	4
Butyl/decyl/cetyl eicosyl methacrylate mixture		SC			4, 7
Butyl chloride		SC	4	1, 4	
Butyl decyl phthalate		SC	4	4	4
Butyl dioxitol		SC	S	U	S
Butylene, alpha, 2-	S	SC	S	S	S
Butylene glycol	S	SC	S	S	S
Butylene, poly	S	SC	S	S	S
n-Butyl ether		SC	S	S	S
Butyl formate					U
Butyl glycidyl ether (BGE)		SC			S
Butyl glycol acetate		SC	1, 4	U	4
Butyl glycol ether	S	SC	S	U	S
Butyl heptyl ketone		SC	S	U	S
Butyl lactate (no heat)		SC	4, 6		U
Butyl methacrylate monomer			1, 4, 7	U	4, 7
Butyl oxitol (Ethylene glycol monobutyl ether)		SC	S	U	S
Butylphenol (ortho, tertiary)			S		S
Butyl phthalate		SC	4		4
n-Butylraldehyde				U	U
Butyl stearate		SC	4		
Butyric acid	U		U	U	U
Butyrolactone					U
gamma-Butyrolactone					U
Butyrone (Heptanone)		SC	S	U	S

Chemical	Devmat 111	Devran 124	Devchem 253	Devchem 257	Catha-Coat 305
Cajaputene (Dipentene)		SC	S	S	S
Calcium alkyl salicylate		SC	S		S
Calcium bromide 48%		SC	S		S
Calcium bromide 53%		SC	S		
Calcium carbonate solution (130°F maximum)	S	SC	S		
Calcium chloride (saturated)	S	SC	S	S	U
Calcium hydroxide 10%	S	SC	S	S	U
Calcium hydroxide 30	S	SC	S	S	U
Calcium hydroxide 50%	S	SC	S	S	U
Calcium hypochlorite 15%		SC	S		U
Calcium hypochlorite solution (over 15%)		SC			U
Calcium naphthenate (in mineral oil)		SC	S	S	
Camphor oil		SC	S	S	
Candelilla oil (Montan)		SC	S	S	3
Candlenut oil		SC	S	S	3
Canola oil, refined	SC	SC	SC	SC	3
Capoc oil		SC	S	S	3
Capric acid			S	U	U
Caproic acid			S	U	U
Caprolactone			U	U	
Capryl alcohol		SC	S	S	S
Caprylic acid (Oxylic acid)	SC	SC	S	U	U
Carbitol acetate		SC	1, 4	U	4
Carbitol solvent (Diethylene gylcol monoethyl ether)		SC	S	U	S
Carbolic Acid (Phenol 100%)	U	USC	U	U	5
Carbolic oil (middle oil)		SC	S	S	S
Carbon black oil		SC	6	6	6
Carbon dioxide (gas) 100%		SC	S	S	S
Carbon disulfide 10%	U	USC	U	U	U
Carbon disulfide 100%	U	USC	U	U	4
Carbon tetrabromide		USC	4		4
Carbon tetrachloride	U	USC	4		4
Carbonic acid 10%		SC	S	S	S
Carbowax 200 (polyethylene glycol)		SC	S	S	S
Carbowax 300 (polyethylene glycol)		SC	S		S
Carbowax 600 (polyethylene glycol)		SC	S	S	S
Cardura E		SC	S		4
Carnation oil (Petrolatum)	S	SC	S	S	S
Carnation white mineral oil	S	SC	S	S	5
Carnauba wax		SC	S	S	3
Cashew nutshell oil		SC	S	S	3
Castor oil	S	SC	S	S	3
Caustic potash	S	SC	S	S	U
Caustic soda (NaOH) 10%	S	SC	S	S	U
Caustic soda (NaOH) 20%	S	SC	S	S	U
Caustic soda (NaOH) 50%	S	SC	S	S	U
Caustic soda 50% spent (no heat)		SC	S		U
Cellosolve (Ethylene glycol monoethyl ether)		SC	S	S	S
Cellosolve acetate (Ethylene glycol monoethyl ether acetate)		SC	1, 4	U	4
Cement	S	SC	S	S	U
Centrex's mineral spirits	S	SC	S	S	S
Cetyl alcohol (Primary hexadecyl alcohol)		SC	S	S	S
Chinawood oil (Tung oil)		SC	4	S	3
Chlorinated diphenyl			4		4
Chlorinated paraffins			S		4
Chlorine, in solution as NaClO (up to 200 ppm)		SC	L30		U
Chlorine, wet (saturated)	U	USC	U	U	U
Chlorine dioxide			U	U	U
Chloroacetic acid			U	U	U
Chloracetyl chloride			U	U	U
Chlorobenzene	U	USC	4	U	4
p-Chloro-m-cresol			U	U	S
2-Chloroethanol					4

Chemical	Devmat 111	Devran 124	Devchem 253	Devchem 257	Cama-Coat 365
Chloroethene		SC			4
Chloroethylene		SC			4
Chloroform (no heat)	U	USC	1, 4, L30		4
Chloropropionic acid			U	U	U
Chloropropylene oxide (epichlorohydrin)			U	U	4
Chlorosulfonic acid	U	USC	U	U	U
Chlorothene (1,1,1-Trichloroethane)		SC	1, 4	U	4
Chlorotoluene (all isomers)		SC	S	U	4
Choline chloride		SC	S		U
Chromic acid 5%	U	SC	6	U	U
Chromic acid 10%	U	SC	6	U	U
Chromic acid 20%	U	SC	U	U	U
Chromic acid 50%	U		U	U	U
Cinene (Dipentene)	S	SC	S	S	S
Circo light oils	S	SC	S	S	S
Circo light oil (extender oil)	S	SC	S	S	S
Circo process oil (extender oil)	S	SC	S	S	S
Circosol oil (extender oil)	S	SC	S	S	S
Citric acid 5%	U	SC	S	S	U
Citric acid 25%	U	SC	S	S	U
Citroflex A-4		SC	S		S
Clorox		SC	S		U
Coal tar benzene		SC	S	S	S
Coal tar naphtha		SC	S	S	S
Cocoa butter		SC	S	S	3
Cocoa butter oil		SC	S	S	4
Cocoa nut oil, crude		SC	S	S	3
Cocoa oil		SC	S	S	3
Coco fatty acid		SC	11	U	U
Coca fatty alcohol		SC	S	S	S
Coco methyl ester		SC	4	4	4
Coconut fatty acid, topped		SC	11	U	U
Coconut fatty acid, whole distilled		SC	11	U	U
Coconut oil, esterfied		SC	S	S	U
Cod liver oil		SC	S	S	3
Cohune palm oil		SC	S	S	3
Colza oil		SC	S	S	3
Copra oil (Coconut oil)		SC	S	S	3
Coray 40 (lubricant)		SC	S	S	S
Core Lube 670 catalyst		SC	U	U	
Core Lube 674 catalyst		SC	U	U	
Corn oil		SC	S	S	3
Corn syrup		SC	S	S	
Cotton seed fatty acid		SC	11	11	U
Cottonseed oil (sulfuric acid-free)	S	SC	S	S	3
Cottonseed oil steanne		SC	S	S	S
Coumarone naphtha solvent		SC	S	S	S
Creosote		SC	1, 4	1, 4	U
Creosote (coal tar)		SC	U	U	U
Cresol (ortho, meta, para)			U	U	5
Cresyl diphenyl phosphate (Santicizer 140)			S		S
Cresylic acid 10%	U		U	U	U
Cresylic acid 100%	U		U	U	
Crotonaldehyde			U	U	U
Croton oil		SC	S	S	3
Crude condensate (naphtha, petroleum)		SC	S	S	S
Crude glycenne		SC	S	S	U
Crude hard fraction PKO (Palm kernel oil)		SC	S	S	U
Crude oil (high and low sulfur)	SC	SC	S	S	4
Cumene		SC	S		S
Cumene, pseudo		SC	S	S	S
Cumol		SC	S		S
Cyclo-Sol 53		SC	S	S	S
1, 5, 9-Cyclododecatriene	9	SC	9	9	9

Chemical	Devmat 111	Devran 124	Devchem 253	Devchem 257	Catha-Coat 305
Cycloheptane	S	SC	S	S	S
Cyclohexane	S	SC	S	S	S
Cyclohexanol		SC	S	S	S
Cyclohexanone		SC	1, 4, L30	U	S
Cyclohexanone/cyclohexanol mixture		SC	1, 4, L30	U	S
Cyclohexene	S	SC	S	S	S
Cyclohexyl acetate		SC	1, 4	U	4
Cyclohexylamine			U	U	U
Cyclopentane	S	SC	S	S	S
Cyclopentene	S	SC	S	S	S
Cycosol (Mineral spirits)	S	SC	S	S	S
Cylinder bright stock oil	S	SC	S	S	S
Cylinder steam refined stock oil	S	SC	S	S	S
p-Cymene (Isopropyl toluene)		SC	S	S	S
Dalapon (2, 2-Dichloropropionic acid)			U	U	U
Dalatinol [Di-(2-ethylhexyl) phthalate]		SC	S	4	S
Dasanit			S		S
Decahydronaphthalene		SC	S	S	S
Decalin (Decahydronaphthalene)	S	SC	S	S	S
Decane (Decyl hydride)	S	SC	S	S	S
Decanoic acid (Capric acid)		SC	4, L60	U	U
Decanol		SC	S	S	S
Decene	S	SC	S	S	S
Decyl alcohol (all isomers)		SC	S	S	S
Decyl acrylate		SC	1, 4	U	4, 7
Decyl benzene		SC	S	S	S
Decyl carbinol (1-Undecanol)		SC	S	S	S
Decyl octyl alcohol		SC	S	S	S
D-D-Soil fumigant (1 ,3-Dichloro propylene and propylene dichloride)			U	U	U
De-icing fluids (glycol based)	S	SC	S	S	S
De-Monomer (shell)		SC			S
Detergent alkylate (Dodecyl benzene)		SC	S	S	S
Dextrose solution		SC	S	S	
Diacetone alcohol		SC	S		S
Dialkyl benzene		SC	S	S	S
Dialkyl phthalate		SC	4	4	4
Diallyl phthalate (DAP)		SC	4	4	4
Dibenzofuran (Diphenylene oxide)			U	U	S
1 ,2-Dibromo-3-dichloropropane				U	4
Dibutylamine			U	U	U
Dibutyl carbitol (Diethylene glycol dibutyl ether)		SC	S	S	S
Dibutyl Cellosolve (Ethylene glycol dibutyl ether)		SC	1	U	S
Dibutyl Maleate		SC			4
Dibutyl phthalate (DBP)	SC	SC	4	4	4
Dibutyl sebacate (DBS)		SC	4	4	4
Dicaprocate (Triethylene glycol)		SC	S	S	S
Dichloroaniline				U	U
Dichlorobenzene (all isomers)	U		U	U	4
Dichlorodifluoromethane				U	4
Dichloroethane (Ethylene dichloride) (no heat)		USC	1, 4, 10	U	4
Dichloroethylene	U		U	U	4
Dichloroethyl ether			U	U	4
Dichlorohexane			U	U	4
Dichloromethane (Methylene chloride)	U	USC	U	U	4
Dichlorophenol				U	4
Dichloropropane			U	U	4
Dichloropropene			4	U	4
Dichloropentane			4	U	4
Dichloropropionic acid				U	U
Dicyclohexylamine			U	U	U
Dicyclopentadiene	S	SC	S	S	S
Diesel fuel	S	SC	S	S	S
Diesel oil	S	SC	S	S	S

Chemical	Devmat 111	Devran 124	Devchem 253	Devchem 257	Carma-Clear [illegible]
Diethanolamine (DEA)			S		U
Diethylamine (no heat)			U	U	U
Diethylaminoethanol (no heat)			1, L60	U	U
2, 6-Diethylaniline					[illegible]
Diethyl benzene	S	SC	S		S
Diethyl carbonate		SC	S		4
Diethylethanolamine (no heat)			1, L60	U	U
Diethyl ether		SC	U	U	S
Diethyl phthalate		SC	4	4	4
Diethyl sulfate		SC			
Diethylene alcohol		SC	S	S	S
Diethylene chloride		SC	U	U	4
Diethyldichloroformal				U	
Diethylene glycol (Dihydroxydiethyl ether)	SC	SC	S	S	S
Diethylene ether (Dioxane)		SC	S	S	S
Diethylene glycol butyl ether acetate		SC	1, 4	U	4
Diethylene glycol dibutyl ether		SC	S	U	S
Diethylene glycol diethyl ether		SC	S	U	S
Diethylene glycol ethyl ether acetate		SC	1, 4	U	4
Diethylene glycol methyl ether		SC	S	U	S
Diethylene glycol methyl ether acetate		SC	1, 4	U	4
Diethylene glycol monobutyl ether		SC	S		S
Diethylene glycol phenol ether		SC			S
Diethylene glycol phenyl ether		SC	S		S
Diethylene glycol phthalate		SC	4	4	
Diethylenetriamine			U	U	
Di(2-ethyl hexyl)adipate		SC	4		
Di(2-ethyl hexyl)phosphonic acid			U	U	U
Di(2-ethylhexyl)phthalate		SC	4	4	4
Diglycidyl ether of bisphenol A		SC	S	S	
Diglycidyl ether of bisphenol F		SC	S	S	
Di-hard-tallow-methylamine			S	U	U
Di-n-hexyl adipate		SC	4	4	4
Diisobutylene	S	SC	S	S	S
Diisobutyl ketone (DIBK)		SC	S	U	S
Diisobutyl phthalate		SC	4	4	4
Diisodecyl phthalate		SC	4	4	4
Diisononyl adipate		SC	4	4	4
Diisooctyl adipate		SC	S	4	4
Diisooctyl phthalate (DIOP)		SC	S	4	S
Diisopropanolamine					U
Diisopropylamine			U	U	U
Diisopropyl benzene		SC	S	S	S
Diisopropyl ether		SC			S
Diisopropyl naphthalene		SC	S		S
Dimethanol amine			U	U	U
Dimethyl adipate		SC	4	4	
Dimethylamine (DMA)			U	U	U
Dimethylamine, 40% aqueous solution)			U	U	U
Dimethylaminoethanol			U	U	U
Dimethylcarbinol (Isopropyl alcohol)		SC	S	S	S
N,N-Dimethyl cyclohexyl amine				U	U
Dimethylethanolamine			U	U	U
Dimethyl formamide	U		U	U	1, L60
Dimethylglutarate (no heat)			4, L60	U	4
Dimethyl ketone (Acetone)		SC	1, 10, L60	U	U
Dimethyl naphthalene sulfonic acid sodium salt solution		SC	9		9
Dimethyl phthalate		SC	4	4	4
2, 2-Dimethyl-1, 3-propanediol		SC			S
Dimethyl sebacate		SC	4	4	4
Dimethyl succinate		SC	4		4
Dimethyl sulfoxide (DMSO)			S	U	
Dimonene (Dipentene)	S	SC	S	S	S

Chemical	Devmat 111	Devran 124	Devchem 253	Devchem 257	Catha-Coat 305
Dinitrotoluene (DNT)			S		4
Dinonyl phthalate (DNP)		SC	4	4	4
Dioctyl adipate		SC	4	4	4
Dioctyl phthalate (DOP)		SC	4	4	4
Diol 80 (lube oil)	S	SC	S	S	S
Dioxane		SC	S	U	S
Dioxitol (Diethylene glycol monoethyl ether)		SC	S	U	S
Dipentene	S	SC	S	S	S
Diphenyl ether		SC	1	U	S
Diphenylmethane 4, 4-diisocyanate (MDI)			S		S
Diphenylmethane isocyanate			U	U	
Diphenyl oxide (Diphenyl ether)		SC	1	U	S
Diphenylene oxide		SC	U	U	S
Diphenylol propane-epichlorohydrin resins		SC	S	S	
Diphenyl oxide/diphonyl phenyl ether mixture		SC	U	U	S
Di-n-propylamine			U	U	U
Dipropyl ketone (Heptanone)		SC	S	U	S
Dipropylene glycol	S	SC	S	S	S
Dipropylene glycol methyl ether		SC	1	U	S
Dipropylene glycol monomethyl ether		SC	1	U	S
Distearyl dimethyl ammonium chloride		SC	S		
Distilled water	S	SC	S	S	S
Ditallow dimethyl ammonium chloride		SC	S		U
Ditridecyl phthalate (DTDP)		SC	S	4	S
Diundecyl phthalate		SC	4	4	4
Divinyl acetate		SC	U	U	4, 7
Dobanes	S	SC	S	S	S
Dobanols (fatty alcohols)		SC	S	S	S
Dodecane	S	SC	S	S	S
Dodecanoic acid (Lauric acid)			S	U	U
Dodecanol (Lauryl alcohol)		SC	S	S	S
Dodecene (Tetrapropylene)	S	SC	S	S	S
Dodecyl alcohol		SC	S	S	S
Dodecyl amine					U
Dodecyl amine/tetradecyl amine mixture					
Dodecylbenzene (Alkane)	S	SC	S	S	S
Dodecyl methacrylate					4, 8
Dodecyl/pentadecyl methacrylate solution					4, 8
Dodecylphenol			S	U	5
Dow Corning FX16		SC	S		S
Dowanol DB (Diethylene glycol butyl ether)		SC	S	U	S
Dowanol DE (Diethylene glycol ethyl ether)		SC	S	U	S
Dowanol DESG (Modified Dowanol DE)		SC	S	U	S
Dowanol DM (Diethylene glycol methyl ether)		SC	S	U	S
Dowanol EB (Ethylene glycol methyl ether)		SC	S	U	S
Dowanol EE (Ethylene glycol ethyl ether)		SC	S	U	S
Dowanol EM (Ethylene glycol methyl ether)		SC	S	U	S
Dowanol EP (Ethylene glycol propyl ether)		SC	S	U	S
Dowanol PM (Propylene glycol methyl ether)		SC	S	U	U
Dowanol PMIX (PM + DPM + TPM)		SC	S	U	S
Dowanol TPM (Tripropylene glycol methyl ether)		SC	S	U	S
Dow 6X (Hexachlorodiphenyl oxide)		SC	4		4
Dow Epoxy Resin 331 (DGE)		SC	S	S	
Drilling brine	S	SC	S	S	U
Drilling mud	S	SC	S	S	
Emulsified vegetable oils		SC	S	S	3
Engine oil	S	SC	S	S	S
Epichlorohydrin	U	USC	U	U	4
Ervol (Petrolatum)	S	SC	S	S	S
Ethanol (technical)	SC	SC	10	10	S
Ethanolamine (MEA)			U	U	U
Ether	SC	SC	U	U	U
Ethidene (Norbonene)		SC	S		S
Ethoxol (Ethylene glycol monoethyl ether)		SC	S	U	S

Chemical	Devmat 111	Devran 124	Devchem 253	Devchem 257	Catha-Coat 305
Ethoxyethanol (Cellosolve)		SC	S	U	S
Ethoxyethyl acetate (Cellosolve acetate)		SC	1, 4	U	4
beta-Ethoxyethylmethacrylate monomer			S	U	4
Ethoxylated fatty alcohols (Shell)		SC	S		3
Ethyl acetate (no heat)	U	USC	1, 4	U	4
Ethylacetic acid (Butyric acid)	U	USC	U	U	U
Ethyl acetoacetate		SC	1, 4	U	4
Ethyl alcohol (denatured)	SC	SC	10		S
Ethylamine 70%			U	U	U
Ethyl amino toluol			U	U	U
Ethyl amyl ketone (EAK)		SC	S	U	S
Ethylbenzene	S	SC	S	S	S
2-Ethylbutanol		SC	S	S	S
Ethyl-n-butylamine				U	U
Ethyl butyrate		SC	4		
Ethyl cellosolve		SC	S	U	S
Ethyl chloride	U				4
Ethylcyclohexane	S	SC	S	S	S
Ethyl cyclohexanone		SC	U	U	U
Ethyl cyclohexylamine				U	U
Ethylene (Ethene)	S	SC	S	S	S
Ethylene carbonate		SC			
Ethylene chloride (Ethylene dichloride) (no heat)		USC	1, 4, 10	U	4
Ethylene chlorohydrin			U	U	4
Ethylene cyanohydrin				U	
Ethylenediamine			U	U	U
Ethylenediamine tetraacetic acid 10% (EDTA)			S	U	U
Ethylenediamine tetraacetic acid, tetrasodium salt solution			S	U	U
Ethylene dibromide			U	U	4
Ethylene dichloride (no heat)	U	USC	1, 4, 10	U	U
Ethylene glycol (Ethylene alcohol)	S	SC	S	S	S
Ethylene glycol (fiber grade)	S	SC	S	S	S
Ethylene glycol acetate		SC	1, 4	U	4
Ethylene glycol butyl ether acetate		SC	1, 4	U	4
Ethylene glycol diacetate (Glycol diacetate)		SC	1, 4	U	4
Ethylene glycol dibutyl ether		SC	1	U	S
Ethylene glycol isopropyl ether		SC	1	U	S
Ethylene glycol methyl butyl ether		SC	1	U	S
Ethylene glycol methyl ether		SC	S	U	S
Ethylene glycol monobutyl ether (2-Butoxyethanol)		SC	S	U	S
Ethylene glycol monobutyl ether acetate		SC	1, 4	U	4
Ethylene glycol monoethyl ether (2-Ethoxyethanol)		SC	S	U	S
Ethylene glycol monoethyl ether acetate		SC	1, 4	U	4
Ethylene glycol monomethyl ether (2-Methoxyethanol)		SC	S	U	S
Ethylene glycol monomethyl ether acetate		SC	1, 4	U	4
Ethylene glycol monophenyl ether		SC	S	U	S
Ethylene glycol phenyl ether		SC	S	U	S
Ethyleneimine				U	
Ethylene oxide (Epoxyethane)			U	U	U
Ethylene polyglycol		SC	S	S	S
Ethyl ether			S	U	S
Ethyl-3-ethoxypropionate		SC	4		4
Ethylhexanoic acid				U	U
Ethylhexanol		SC	S	S	S
2-Ethylhexanol		SC	S	S	S
Ethyl hexoic acid (2-Ethyl hexoic acid)				U	U
2-Ethylhexyl acetate		SC	1, 4	U	4
2-Ethylhexyl acrylate		SC		U	
2-Ethylhexyl alcohol		SC	S	S	S
2-Ethylhexylamine			U	U	U
2-Ethylhexyl 2-mercapto acetate				U	
Ethylidene chloride (1, 1-Dichloroethane)				U	

Chemical	Devmat 111	Devran 124	Devchem 253	Devchem 257	Catha-Coat 305
Ethyl lactate		SC	4, L30	U	4
Ethyl methacrylate monomer			U	U	U
Ethyl ortho silicate		SC	S		S
Ethyl PCT					
Ethyl phthalate		SC	4	4	4
o-Ethylphenol			U	U	
Ethyl propionate		SC	4		4
2-Ethyl-3-propylacrolein					
Ethyl silicate, condensed		SC	S		S
Ethyltoluene		SC	S	S	S
Extender/process oils	S	SC	S	S	S
Fatty acids, refined (animal and vegetable derived)		SC	11	U	U
Fatty alcohol, natural		SC	S	S	3
Fatty alcohols, synthetic		SC	S	S	3
Ferric chloride 20%	SC	SC	6		U
Ferric sulfate (up to 20%)	SC	SC	S		U
Fertilizer solutions		SC	S	S	U
Fire fighting foams: Aer-O-Lite 3 (Chubb National) Aer-O-Lite 3 Cold Foam (Chubb National) High Expansion (Chubb National) Universal gold (Chubb National) Universal Plus (Chubb National)		 SC SC SC SC SC	 S S S S S		
Fish liver oil		SC	S	S	3
Fish oil		SC	S	S	3
Fish oil solubles		SC	11		3
Flexindra (process extender oil)	S	SC	S	S	S
Flexol DIOP (Dilsooctyl phthalate, 10-10 Dilsodecyl phthalate))		SC	4	4	4
Flexol DOP (Di-2-ethylhexyl phthalate)		SC	4	4	4
Flexol EOP (Epoxidized soybean oil)		SC	S	S	3
Flexol NHDP (Normal, heavy, n-octyl, n-decyl phthalate)		SC	4	4	4
Flexon process oil	S	SC	S	S	S
Fluorosilicic acid (Fluosilicic acid)	U		U	U	U
Foots soapstock oil (sulfuric acid-free)	SC	SC	S	S	U
Formaldehyde 100% (HCHO)	SC	SC	U	U	U
Formaldehyde solution 37%	SC	SC	U	U	U
Formaldehyde solution 38%—50% by weight	SC	SC	U	U	U
Formalin	SC	SC	U	U	U
Formamide			U	U	U
Formic acid 10%	U	USC	U	U	U
Fuel, jet JP4, JP5, etc.	S	SC	S	S	S
Fuel oil	S	SC	S	S	S
Fuel oil #2	S	SC	S	S	S
Fumaric adduct of rosin (water dispersion)		SC			
Furfural, corn, oat or rice extract (Ant oil)	U		U	U	3, 4
Furfuryl alcohol (Furyl carbinol) (no heat)	SC		L30	U	S
Fusel oil, acid free (Amyl alcohol)		SC	S	S	S
Gas oil	S	SC	S	S	S
Gasoline	S	SC	S	S	S
Gas plant naphtha (Petroleum naphtha)	S	SC	S	S	S
Gentrex (lube oil)	S	SC	S	S	S
Getty antifreeze		SC	S	S	S
Glacial acetic acid		SC	U	U	U
Gluconic acid 50%			S	U	U
Glucose	SC	SC	S	S	
Glucose Syrup		SC	S	S	
Glutaraldehyde solution					
Glycerin, crude (Glycerine)	S	SC	S	S	U
Glycerin, synthetic	S	SC	S	S	S
Glycerol	S	SC	S	S	3
Glyceryl triacetate (Triacetin)		SC	4	4	4
Glycine, sodium salt solution		SC			
Glycol (Dihydric alcohol)		SC	S	S	S

Chemical	Devmat 111	Devran 124	Devchem 253	Devchem 257	Catha-Coat 305
Glycol Alkyl ethers		SC	S	U	S
Glycol diacetate		SC	1, 4	U	4
Glycol monoethers		SC	S	U	S
Glyoxal solution (40% or less)			S	U	U
Grain oil (Fusel oil)		SC	S	S	S
Grapeseed oil		SC	S	S	S
Grapestone oil		SC	S	S	S
Gravex (lube oil)	S	SC	S	S	S
Grease, animal		SC	S	S	U
Grease, yellow		SC	S	S	U
Gulf (lube oils)	S	SC	S	S	S
Gulf base stock 900	S	SC	S	S	S
Hard fraction oil		SC	S	S	S
Hazelnut oil		SC	S	S	S
Heart cut distillate (Exxon solvent blend)		SC	S	S	S
Heavy aromatic naphtha		SC	S	S	S
Heptadecane	S	SC	S	S	S
Heptadecane 3-heptanol		SC	S	S	S
Heptane (all isomers)	S	SC	S	S	S
Heptanoic acid			L30	U	U
1-Heptanol (Enanthic alcohol)		SC	S	S	S
3-Heptanol		SC	S	S	S
2-Heptanone (Methyl n-amyl ketone)		SC	S	S	S
Heptanone (Ethyl butyl ketone)		SC	S	U	S
1-Heptene (1-Heptylene)	S	SC	S	S	S
Heptyl acetate		SC	1, 4	U	4
Heptyl alcohol (all isomers)		SC	S	S	S
Hexachlorocyclopentadiene					
Hexachloropentadiene			4		4
Hexachlorodiphenyl oxide				U	4
Hexadecane (Cetane)	S	SC	S	S	S
1-Hexadecanol (Hexadecyl alcohol)		SC	S	S	S
Hexadecanoic acid (Palmitic acid)			S	U	U
Hexadecenoic acid (Palmitoleic acid)			S	U	U
Hexahydroaniline (Cyclohexylamine)			U	U	U
Hexahydrobenzene (Cyclohexane)	S	SC	S	S	S
Hexahydrocymol		SC	S		S
Hexahydrophenol (Cyclohexanol)		SC	S	S	S
Hexalin		SC	S	S	S
Hexamethylene (Cyclohexane)	S	SC	S	S	S
Hexamethylenediamine			U	U	U
Hexamethylenediamine solution			U	U	U
Hexamethylenediamine adipate (50% in water)			U	U	U
Hexamethylenimine				U	
Hexamethylenetetramine (HMTA)			U	U	U
Hexanaphthene (Cyclohexane)	S	SC	S	S	S
Hexane (all isomers)	S	SC	S	S	S
Hexane triol		SC	S	S	S
Hexanol (all isomers)		SC	S	S	S
Hexanoic acid (Caproic acid)			S	U	U
Hexene	S	SC	S	S	S
Hexoic Acid (Caproic Acid)			S	U	U
Hexone (Methyl isobutyl ketone)		SC	1, L60	U	S
Hexyl acetate		SC	1, 4	U	4
Hexyl alcohol (iso, normal)		SC	S	S	S
Hexylene glycol		SC	S	S	S
Hexylic acid (Caproic acid)			S	U	U
Hydrazine 5%	U		S	U	L60
Hydrazine 30%	U	USC			L30
Hydrocarbons, aliphatic	S	SC	S	S	S
Hydrocarbons, alpha	S	SC	S	S	S
Hydrocarbons, aromatic		SC	S	S	S
Hydrochloric acid 5%	SC	SC	U	U	U
Hydrochloric acid 10%	SC	SC	U	U	U

Chemical	Devmat 111	Devran 124	Devchem 253	Devchem 257	Catha-Coat 305
Hydrochloric acid 20%	U	SC	U	U	U
Hydrochloric acid 37%	U	SC	U	U	U
Hydro crackate (gasoline)	S	SC	S	S	S
Hydrofluoric acid 10%	U	USC	U	U	U
Hydrogen chloride gas, dry		SC	U	U	U
Hydrogen fluoride	U	USC	U	U	U
Hydrogen sulfide, saturated	U		S	U	U
Hydroxyethyl acrylate				U	
Hydroxylamine, solution			S	U	U
Hydroxymethyl benzene (Cresol)		SC	U	U	S
2-Hydroxy-4-(methylthio)butanoic acid				U	
Illipe butter (Mowrah butter)			S	S	3
Inedible tallow		SC	S		U
Intermediate detergent (fatty alcohol)		SC	S	S	3
Isoamyl acetate		SC	1, 4	U	4
Isoamyl alcohol		SC	S	S	S
Isoamylene	S	SC	S	S	S
Isobutyl acetate		SC	1, 4	U	4
Isobutyl acrylate		SC	4	U	
Isobutyl alcohol		SC	S	S	S
Isobutyl aldehyde			U	U	U
Isobutyl carbinol (Isoamyl alcohol)		SC	S	S	S
Isobutyl formate			4, 9		
Isobutyl isobutyrate		SC	4		4
Isobutyric acid			U	U	U
Isodecane	S	SC	S	S	S
Isodecanol		SC	S	S	S
Isohexanol		SC	S	S	S
Isononanoic acid				U	U
Isononyl alcohol		SC	S	S	S
Isooctane	S	SC	S	S	S
Isoctyl alcohol (Isooctanol)		SC	S	S	S
Isopar E (Esso isoparaffin)	S	SC	S	S	S
Isopar G (Esso isoparaffin)	S	SC	S	S	S
Isopar H (Esso isoparaffin)	S	SC	S	S	S
Isopar K (Esso isoparaffin)	S	SC	S	S	S
Isopar L (Esso isoparaffin)	S	SC	S	S	S
Isopar M (Esso isoparaffin)	S	SC	S	S	S
Isopentane	S	SC	S	S	S
Isophorone			U	U	S
Isophorone diamine			U	U	U
Isophorone diisocyanate					
Isoprene	S	SC	S	S	S
Isopropanolamine			U	U	U
Isopropyl acetate		SC	1, 4	U	4
Isopropyl alcohol	SC	SC	S	S	S
Isopropylamine 50%			U	U	U
Isopropylamine 100% (no heat)			U	U	U
Isopropyl benzene (Cumene)	S	SC	S	S	S
Isopropyl cyclohexane	S	SC	S	S	S
Isopropyl ether		SC	S	S	S
Isopropyl oxitol		SC	S	S	S
Japan wax		SC	S	S	3
Jeffersol (Ethylene glycol monomethyl ether)		SC	S	S	S
Jet fuel, JP4, JP5, etc.	S	SC	S	S	S
Jojoba oil		SC	S	S	S
Kapoc oil		SC	S	S	3
Kasil (Potassium silicate)		SC	S		U
Kaydol (mineral oil)	S	SC	S	S	S
Kaydol (petrolatum)	S	SC	S	S	
Kellin (Linseed oil)		SC	S	S	3
Kerex (Mineral spirits)		SC	S	S	S
Kerosene	S	SC	S	S	S
Ketohexamethylene (Cyclohexanone)		SC	1, 10, L30	U	S

Chemical	Devmat 111	Devran 124	Devchem 253	Devchem 257	Castle-Coat 365
Klearol (petrolatum)	S	SC	S	S	S
KMC-113 Solvent (Diisopropyl naphthalene)		SC	S	S	S
KMC Oil (Diisopropyl naphthalene)		SC	S	S	S
Kodaflex (Hexanol isobutyrate)		SC	S	S	S
Lactic acid, 20%	U	SC	6	U	U
Laktane (normal paraffin solvent)	S	SC	S	S	S
Lamp oil (Kerosene)	S	SC	S	S	S
Lanolin		SC	S	S	3
Lard		SC	S		3
Lard oil		SC	S		3
Larex			S		3
Lasso herbicide (no heat)			S		
Latex rubber, natural (ammonia stabilized)		SC	S		U
Lauric acid (Fatty acid)			11	U	U
Lauric/myristic acid mixture			11	U	U
Lauryl alcohol		SC	S	S	S
Law (Mineral spirits)		SC	S	S	S
Lignosite (50% lignin liquor)		SC	S		U
Ligroin	S	SC	S	S	S
Lime slurry		SC	S	S	U
Limonene (Dipentene)	S	SC	S	S	S
Linear alcohols (Tergitols)		SC	S	S	S
Linear paraffin (Tridecane)	S	SC	S	S	S
Linevol			S		S
Linoleic acid (fatty acid)			11	U	U
Linolenic acid (fatty acid)			11	U	U
Linseed oil	S	SC	S	S	3
Low aromatic white spirit (Mineral spirits)	S	SC	S	S	S
Lube Oil	S	SC	S	S	S
Lycopersicum esculentum oil (Tomato seed oil)		SC	S	S	
Lye	S	SC	S	S	U
Magnesium hydroxide		SC	S	S	U
Magnesium sulfonate		SC	S		
Maize oil		SC	S	S	3
Maleic acid 10%	SC	SC	L30	U	U
Maleic anhydride			S	U	
Margaric acid (Heptadecanoic acid)			L30	U	U
Meadow foam oil		SC	S	S	
Menhaden oil		SC	S	S	3
Mercaptans			L30	U	U
Mercaptobenzothiazol sodium salt solution					
Mesamoll (Phenol/cresol alkyl sulfonic esters)					S
Mesitylene		SC	S		S
Mesityl oxide			S	U	U
Metam sodium solution			S		
Meta-toluene diisocyanate (TDI)			7		7
Methacrylate monomer			U	U	U
Methacrylic acid			U	U	U
Methacrylonitrile				U	7
Methallyl alcohol		SC	S	S	S
Methanol (0.1% maximum water content)	SC	SC	1, 10	U	S
Methenamine (HMTA)			U	U	U
3-Methoxybutyl acetate			1, 4	U	4
2-Methoxyethanol (Methyl cellosolve)		SC	S	U	S
Methoxypropylene glycol		SC	S		S
Methyl acetate		SC	1, 4	U	4
Methyl acetoacetate		SC	1, 4	U	4
Beta-methyl acrolein (Crotonaldehyde)			U	U	U
Methyl acrylate, inhibited			4	U	4
Methyl acrylic acid			U	U	U
Methyl alcohol (0.1% maximum water content)	SC	SC	1, 4	U	S
Methylallyl alcohol		SC	S	S	S
Methylallyl chloride			4		4
Methylamine solutions			S	U	

Chemical	Devmat 111	Devran 124	Devchem 253	Devchem 257	Catha-Coat 305
2-Methylamyl acetate		SC	1, 4	U	4
2-Methylamyl alcohol		SC	S	S	S
Methylamyl ketone		SC	1	U	S
Methylbenzene (Toluol)	S	SC	S	S	S
Methyl bromide					
2-Methyl butanol		SC	S	S	S
Methyl butenol		SC	S	S	S
Methyl tertiary-butyl ether (MTBE)		SC	S	S	S
Methyl butyl ketone		SC	1	U	S
Methyl butynol		SC	S	S	S
Methylbutyraldehyde			U	U	U
Methyl butyrate			4		4
Methyl carbitol (Diethylene glycol monomethyl ether)		SC	S	U	S
Methyl cellosolve (Ethylene glycol monomethyl ether)		SC	S	U	S
Methyl cellosolve acetate (Ethylene glycol monomethyl ether acetate)		SC	1, 4	U	4
Methyl chloride					
Methylchloroform (1,1 ,1-Trichlorethane)		SC	4	U	4
Methylcyclohexane	S	SC	S	S	S
Methylcyclopentadiene	S	SC	S	S	S
Methyldiethanolamine (MDEA)			U	U	U
Methyl dioxitol (Diethylene glycol monomethyl ether)			S	U	S
Methyl ester C-8/10 (Coca methyl ester)		SC	4		4
Methylene chloride	U	USC	U	U	4
Methylene diisocyanate					
Methylene dichloride	U	USC	U	U	4
2-Methyl-6-ethylaniline (Ethylamino toluol)				U	
Methylethylcarbinol		SC	S	S	S
Methyl ethyl ketone (MEK)	U	SC	1, L30	U	S
2-Methyl-5-ethylpyridine			U	U	U
Methyl formate			U	U	U
Methyl glycol (Propylene glycol)		SC	S	S	S
Methyl glycol acetate		SC	1, 4	U	4
Methyl heptyl ketone		SC	S	U	S
2-Methyl hexyl acrylate		SC	4		4
2-Methyl-2-hydroxy-3-butene		SC	9		9
2-Methyl-2-hydroxy-3-butyne		SC	9		9
Methyl isoamyl ketone (MIAK)		SC	1, L60	U	S
Methyl isobutyl carbinol		SC	S	S	S
Methyl isobutyl ketone (MIBK)		SC	1, L60	U	S
Methyl laurate		SC	4		4
Methyl methacrylate monomer				U	4, 7
Methyl naphthalene (alpha/beta)		SC	S	S	S
Methyl naphthalene fractions		SC	S	S	S
Methyl oxitol (Methyl cellosolve)		SC	S	U	S
Methyl oxitol acetate		SC	1, 4	U	4
2-Methyl-1–pentene	S	SC	S	S	S
4-Methyl-1–pentene	S	SC	S	S	S
Methyl phenol (Cresol)			U	U	5
2-Methylpropionic acid			U	U	U
Methyl propyl glycol		SC	S	S	S
2-Methylpyridine			U	U	U
n-Methyl-2-pyrrolidone (NMP)	U	USC	U	U	U
Methylpyrrolidone (NMP)	U	USC	U	U	U
Methyl salicylate		SC			
Methylstyrene, alpha (inhibited)		SC	7		7
Methyl sulfoxide (DMSO)					SC
Methyl tertiary-butyl ether (MTBE)	S	SC	S	S	S
Middle oil (Coal tar)		SC	S	S	S
Mineral oil—white (petrolatum)	S	SC	S	S	S
Mineral seal oil (lube oil)	S	SC	S	S	S
Mineral spirits	S	SC	S	S	S

Chemical	Devmat 111	Devran 124	Devchem 253	Devchem 257	Cachu-Coat 305
Mineral spirits #3	S	SC	S	S	S
Mineral spirits #4	S	SC	S	S	S
Mineral spirits #10	S	SC	S	S	S
Monobutylamine			U	U	U
Monchlorobenzene		USC	S	U	4
Monethanolmaine			U	U	U
Monoethylamine, 70% in water			U	U	U
Monethylene glycol		SC	S	S	S
Monoethylene glycol ether		SC	S	S	S
Monoisopropanolamine			U	U	U
Monomethylamine			U	U	U
Mononitrobenzene			S	U	4
Monopropylene glycol		SC	S	S	S
Monsanto Resin Plasticizer HB40		SC	S	S	S
Monsanto Santicizer 140		SC	S		S
Monsanto Santicizer 148		SC	S		S
Morpholine (Tetrahydro-1, 4-oxazine)					
Motor oils	S	SC	S	S	S
MTBE	S	SC	S	S	S
Murumuru fat		SC	S		
Myrcene		SC	S		S
Myristic acid			S	U	U
Myristyl alcohol		SC	S		S
Nalkylene (detergent alkylates)		SC	S		S
Naphtha		SC	S	S	S
Naphtha, crude condensate		SC	S	S	S
Naphtha, gasplant		SC	S	S	S
Naphtha, grade		SC	S	S	S
Naphtha, heavy (coal tar)		SC	S	S	S
Naphtha, light		SC	S	S	S
Naphtha, M50		SC	S	S	S
Naphtha, natural liquid		SC	S	S	S
Naphtha, petroleum		SC	S	S	S
Naphtha solvent (160° benzol)		SC	S	S	S
Naphtha, unfinished		SC	S	S	S
Naphtha, unfinished virgin		SC	S	S	S
Naphtha, whole		SC	S	S	S
Naphthalene 100%		SC	S	S	S
Naphthalene oil (maximum heat 80°C)		SC		S	
Naphthenic acid ($C_6H_{11}COOH$)			S	U	U
Naphthenic oils (extended oils)	S	SC	S	S	S
Naprex 50 (lube oil)	S	SC	S	S	S
Natural liquid gas (Petroleum naphtha)	S	SC	S	U	S
Natural rubber latex		SC	7		U
Neatsfoot oil		SC	S	S	3
Necton 78		SC	S		S
Neodecanoic acid			S	U	U
Neodol (fatty acid)			11	U	3
NeoLine			S		S
Neu-Tri (Dow Trichlorethylene)			4	U	4
Niax Diol			S		S
Nitration grade toluene		SC	S	S	S
Nitric acid 15%	U	USC	U	U	U
Nitric acid 5%	U	USC	U	U	U
Nitric acid 15%	U	USC	U	U	U
Nitric acid 30%	U	USC	U	U	U
Nitric acid 70%, aqueous solution	U	USC	U	U	U
Nitrobenzene			S	U	4
o-Nitrochlorobenzene				U	4
Nitroethane			S	S	
Nitrogen fertilizers		SC	S	S	U
Nitromethane			1, L30	U	4
Nitrophenol (ortho, mete and para)				U	
1–Nitropropane			S		4

Chemical	Devmat 111	Devran 124	Devchem 253	Devchem 257	Catha-Coat 305
Phenylformic acid (Benzoic acid)			S	U	U
Phenylglycidyl ether			U	U	S
Phenylmethane (Toluol)	S	SC	S	S	S
Phenylmethanol (Benzyl alcohol)		SC	S	S	S
Phenylmethyl acetate (Benzyl acetate)			4		U
1-Phenyl-1-xylyl ethane			S	S	S
Phosgene			U	U	4
Phosphate ester			S		S
Phosphoric acid 10%		SC	U	U	U
Phosphoric acid 20%		SC	U	U	U
Phosphoric acid 30%	U	SC	U	U	U
Phosphoric acid 85% aqueous solutions	U	SC	U	U	U
Phosphorous trichloride			U	U	U
Phosphoryl chloride (Phsophorous oxychloride)			U	U	U
Phthalate plasticizers			4	4	4
Phthalate 79 (Diisooctyl phthalate)			4	4	S
Phthalate 911 (DIOP)			4	4	S
Phthalic anhydride					U
Pilchard oil			S	S	3
Pinene (alpha, beta and mixed)	S	SC	S	S	S
Pine oil	S	SC	S	S	S
Pine tar		SC	S	S	S
Piperylene (1, 3-Pentadiene)	S	SC	S	S	7
Pluracol			S		S
Pluronic (Wyandotte polyol)			S		S
Polyalkyl (C-8/22) acrylate in xylene					
Polyalkylene glycols/polyalkylene glycol monoalkyl ethers mixture					
Polyalkylene oxide polyol					
Polybutene	S	SC	S	S	S
Polybutylene	S	SC	S	S	S
Polybutylene 24, Chevron	S	SC	S	S	S
Polyether glycols		SC	S	S	S
Polyethylene pellets (dry)		SC	S	S	S
Polyethylene glycol		SC	S	S	S
Polyethylene glycol monoalkyl ether		SC	S	S	S
Polyethylene polyamines				U	
Polyisobutylene (Polybutene)	S	SC	S	S	S
Poly (20) oxyethylene sorbitan monooleate					
Poly pluracol			S		S
Polypropylenebenzene			S	S	S
Polypropylene glycol			S		S
Poly Solv D			S		S
Poppy seed oil			S	S	3
Potassium chloride (50% max)		SC	S	S 180°F MAX	
Potassium hydroxide 20%	S	SC	S	S	U
Potassium hydroxide 50%	S	SC	S	S	U
Potassium oleate			S	S	
Potassium silicate			S		U
Potato oil (Fusel oil)			S	S	3
Premium mogas 98	S	SC	S	S	S
Priminox R-IM			S		
Process-H oils (extender oils)	S	SC	S	S	S
Process naphtha	S	SC	S	S	S
Propane	S	SC	S	S	S
Propane diol		SC	S	S	S
Propanol		SC	S	S	S
n-Propanol amine			U	U	
2-Propenal (Acrolein)			U	U	U
Propanenitrile (Acrylonitrile)			U	U	4
Propiolactone (USAN, BPL)			U	U	U
Propionaldehyde			U	U	U
Propionic Acid			U	U	U

Chemical	Devmat 111	Devran 124	Devchem 253	Devchem 257	Cetha-Coat 305
Propionic anhydride			U	U	U
Propionitrile				U	4
Propyl acetate (iso and normal)			1, 4	U	4
n-Propyl alcohol		SC	S	S	S
Propylamine (iso and normal)			U	U	U
Propylbenzene (iso and normal)	S	SC	S	S	S
Propylcarbinol (n-Butyl alcohol)			S	S	S
Propylene	S	SC	S	S	S
Propylene chloride			4	U	4
Propylene dichloride			4	U	4
Propylene dimer	S	SC	S	S	S
Propylene glycol	SC	SC	S	S	S
Propylene glycol ethyl ether		SC	1	U	S
Propylene glycol monoalkyl ether		SC	S	U	S
Propylene glycol monomethyl ether		SC	1, L30	U	S
Propylene glycol monomethyl ether acetate		SC	4, L30	U	4
Propylene glycol, poly		SC	S		S
Propylene oxide			U	U	S
Propylene polymer	S	SC	S	S	S
Propylene tetramer	S	SC	S	S	S
Propylene trimer	S	SC	S	S	S
Pseudo-cumene	S	SC	S	S	S
Pumpkinseed oil			S	S	3
Pyridine			U	U	U
Pyrolysis fuel (fuel oil)	S	SC	S	S	S
Quakersol			S		S
Quaternary ammonium chloride	SC	SC	L30	U	
Quenching oil		SC	S	S	S
Raisin seed oil			S	S	3
Rape oil (Rapeseed oil)			S	S	3
Rapeseed oil, hydrogenated			S	S	3
Rectified spirit (ethyl alcohol)		SC	S	S	S
Red oil (Oleic acid)			S	U	U
Reproxal (Texaco Alfol 610 Phthalate)			S		S
Resin oil (Coumarone oil)			S	S	S
Resin concentrate (Esso)			S		S
Resin Plasticizer HB40 (Monsanto partially hydrogenated terphenyl)			S		S
Resolube			S		S
Retardsol			S		S
Rexonic N7			S		
Rhoplex AC-388		SC	S		7
Rice bran oil			S	S	3
Ricinus oil (castor oil)			S	S	3
Rohm & Haas Emulsion E-1440		SC	S		U
Rohm & Haas Solvent 2026			S		S
Rosin			S		S
Rosin soap			S		
SA 119 (Exxon)			U	U	U
Safflower oil	SC	SC	SC	SC	3
Sal fat			S	S	
Salad oil			S	S	3
Sangajol			S		S
Santalol			S		S
Santicizer 140 (Monsanto mixed cresyl diphenyl phosphate)			S		S
Santicizer 148 (Monsanto iso decyldiphenyl phosphate)			S		S
Santicizer 160 (Monsanto Butyl benzyl phthalate)			S	4	S
Santicizer 711 (Monsanto di normal alkyl phthalate)			S	4	S
Santicizer 790 (Monsanto)			S		S
Santochlor (Monsanto p-dichlorobenzene)			U	U	4
Sardine oil			S	S	3

Chemical	Devmat 111	Devran 124	Devchem 253	Devchem 257	Catha-Coat 305
Whale oil			S	S	3
White mineral oil (Petrol, liquid)	S	SC	S	S	S
White oil	S	SC	S	S	S
White spirits (Mineral spirits)	S	SC	S	S	S
White spirit 100 (Mineral spirits)	S	SC	S	S	S
White spirit 150 (Mineral spirits)	S	SC	S	S	S
White spirit 160/180	S	SC	S	S	S
Wood oil			S	S	S
Wool fat			S	S	3
WSX1 oil (petrolatum, liquid)	S	SC	S	S	S
Xylene (meta, ortho and para)	S	SC	S	S	S
Xylenol					8
Yarmor oils			S	S	3
Yellow grease		SC	S	S	U
Zinc bromide 9% (no heat)			S		U
Zinc calcium bromide (50%)			S		U
Zolex			S		S
Zymol			S		3