



ICI Devvoe Coatings is a member of the ICI Paints World Group

DEVCHEM® 253

Chemical Resistant Lining

Cat. # 253KXXXX

PRODUCT DESCRIPTION

Generic: Two-Component Epoxy Novolac

General Description: A high solids, two coat chemical resistant lining system with exceptional resistance to a wide range of chemicals and solvents. Provides exceptional resistance over a wide range of temperatures and pressures. Features realistic application and cure schedules, and does not require baking to cure.

Typical Uses: Ideal for industrial storage and process chemical tanks and pipelines, high pressure crude oil pipes and separation tanks. Also used as a protective coating for highly corrosive environments.

SPECIFICATION DATA

Color: Off- White (253K3750), Tank Gray (253K2750), Pastel Red (253K7750), Pale Blue (253K4750)

Finish: Semi-Gloss

Reduction Solvent: T-10 Thinner

Clean-up Solvent: T-10 Thinner

Weight/Gallon: 11.6 lbs./gal. (1.39 kg/L)

VOC (EPA 24): 1.78 lbs./gal. (213 g/L)

Solids By Volume (ASTM D 2697-7days): 72%

Theoretical Coverage at 1.0 Mil (25 microns) Dry: 1155 sq. ft./gal. (24.8 m²/L)

Recommended Film Thickness: Two Coat System – 5.0-6.0 mils (125-150 microns) dry – 6.9-8.3 mils (173-208 microns) wet. Three Coat System – 4 mils (100 microns) dry – 5.5 mils (140 microns) wet. **Total recommended dry film thickness** – 10-12 mils (250-300 microns) dry. Maximum dry film thickness is 18 mils (450 microns).

Systems: Please consult the appropriate system guide, the particular job specification or your ICI Devvoe Coatings' Industrial Coatings Specialist for proper systems using this product. Systems must be selected considering the particular environment involved.

Service Temperature Limits: 300°F (149°C) dry

Minimum Dry Time (ASTM D 1640): At 4 mils (100 microns) DFT

Substrate Temperature	50°F(10°C)	77°F(25°C)	90°F(32°C)
Self Recoat			
Minimum	24 hours	10 hours	4 hours
Maximum	6 days	4 days	24 hours

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 Devvoe Coatings Specialist 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 Industrial Coatings Specialist 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

Hardness (ASTM D 3363, 7 day cure @ 77°F (25°C): 6H

Mix Ratio By Volume: 4 (base): 1 (converter) – see mixing instructions.

Induction: 15 minutes at 77°F (25°C) – see mixing instructions.

Pot Life: 3 hours @ 77°F (25°C) & 50% R.H.

FEATURES

Advantages:

- Realistic application properties and cure schedules
- Does not require baking to cure
- High volume solids; two coat system
- Exceptional resistance to a wide variety of chemicals and solvents

Limitations of Use: See the ICI Devvoe Coatings Tank Lining Chemical Resistance Table for specific resistance properties.

Exterior exposure will cause color change, early dulling and loss of gloss, but this does not affect the protective properties of the coating.

Not recommended for immersion in inorganic acids

PERFORMANCE DATA

Adhesion: (ASTM D 4541) – Excellent

Abrasion Resistance: (ASTM D 4060) – Excellent

Humidity Resistance: (ASTM D 2247) – Excellent

Impact Resistance: (ASTM D 2794) – Good

Salt Spray Resistance: (ASTM B 117) – Excellent

Chemical and Solvent Resistance: (ASTM D 1308) –Excellent

DANGER! COMBUSTIBLE. HARMFUL OR FATAL IF SWALLOWED. Read label and Material Safety Data Sheet Prior to Use. See other cautions on last page.

DSFX-XXXX



A member of the ICI Paints World Group

FINISHES
SPECIAL COATINGS (9800)

09800

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 – Abrasive blast to minimum SSPC-SP10 or SSI-Sa2½ near-white. Blast profile on steel should be 1½ - 2½ mils (38-62 microns) in depth and be of a sharp, jagged, nature as opposed to a "peen" pattern (from shot blasting). Surfaces must be free of grit dust. The first coat of the system

should be applied to cleaned surfaces as soon as possible to prevent re-rusting or contamination. **Concrete Floors-Poured Concrete** – Cure at least 30 days, abrasive blast or acid etch. Prime with PRE-PRIME™ 167 or this coating thinned with T-10 Thinner in a 4:1 ratio.

Previously Painted Surfaces: Remove old paint, prepare surface and prime as for new steel. Achieve a minimum of SSPC-SP10 or SSI-Sa2½.

DIRECTIONS FOR USE

Tinting: Do not tint.

Thinning: Thinning is not normally required or desirable; However, at lower temperatures, small amounts (5% or less) of Devco Coatings T-10 Thinner can be added to the mixed components depending on local VOC and air quality regulations. Any solvent addition should be made after the two components are thoroughly mixed. The pot life of the mixed material is 4 hours at 77°F (25°C); 2 hours at 90°F (32°C); and 1 hour at 100°F (38°C). Higher temperatures will reduce working life of the coating; lower temperatures will increase it.

Mixing: DEVCHEM 253 Lining is a two-component product supplied in 5 gallon or 1 gallon kits which contain the proper ratio of ingredients. The entire contents of each container must be mixed together. Stir the base portion first to obtain a smooth, homogeneous condition. 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.

Application: Minimum application surface temperature is 50°F (10°C). DEVCHEM 253 Lining should be applied only by air or airless spray. Brushing can be used for touch up or striping, do not use rollers. Brushing may require multiple coats to achieve correct film thickness and/or hiding. For air spray, use agitated spray pots, 1/2" ID air hoses and 1/2" fluid hose. DeVilbiss MBC-510 gun with an E or D tip and needle and a 704 air cap, or equivalent equipment is recommended. For airless spray application, use 100 psi air pressure, 3/8" ID fluid hoses not exceeding 100 feet in length, a 30 to 1 or larger heavy duty Graco pump or equivalent, and .015" to .023" range tip sizes.

Ventilation: It is very important for the safety of the applicator and the proper performance of the DEVCHEM 253 Coating that good ventilation be provided to all portions of the enclosed area. Recommended tank ventilation involves two important phases. Phase one is to pump fresh, dehumidified air into all areas of the tank, especially "dead air" areas. Phase two is to exhaust, via an explosion proof exhaust fan, the solvent vapors from the lowest portion of the tank.

This practice of pumping fresh air into the tank and exhausting solvent vapors out of the lowest part of the tank should be provided throughout the application and curing processes. This practice is to insure that all solvents are removed from the coating. Tanks must be cured 7 days at 77°F (25°C) with ventilation before being put into service. At lower temperatures, longer cure times are required.

Coating System: Two stripe coats on all sharp edges, cutouts and welds. Two coats of DEVCHEM 253 Lining at 5-6 mils (125-150 microns) per coat. Use contrasting colors for each coat and stripe coat. **Note:** The maximum dry film thickness of the DEVCHEM 253 system is 18 mils (450 microns). Dry film thickness above 18 mils (450 microns) could reduce the service life of the coating. Cure to put tank into service: 7 days with ventilation at 77°F (25°C) for maximum chemical resistance. If forced heat cure is desired, contact your ICI Devco Coatings Representative.

Dry Time: If paint and surface temperatures exceed 90°F (37°C), reduce recoat time by one half. See Application Guide Supplement.

Surface Temperature °Fahrenheit	Minimum	Recoat Time Maximum
<50°	Not Allowed	
50°-59°	24 hours	6 days
60°-69°	16 hours	5 days
70°-79°	10 hours	4 days
80°-89°	7 hours	60 hours
90°-99°	4 hours	24 hours
100°-109°	3 hours	18 hours
110°-120°	3 hours	18 hours
>120°	Not Allowed	

Clean-up: Use T-10 Thinner.

PRECAUTIONS

DANGER! COMBUSTIBLE LIQUID AND VAPOR. 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. MAY BE HARMFUL IF ABSORBED THROUGH SKIN. OVEREXPOSURE MAY CAUSE LIVER, KIDNEY DAMAGE. USE ONLY WITH ADEQUATE VENTILATION. KEEP OUT OF THE REACH OF CHILDREN. NOTICE: Products in this series may 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. For additional safety information, refer to the Material Safety Data Sheet for this product. Keep away from heat, sparks and flame. **Do not smoke.** Vapors may ignite. Extinguish all flames, burners, stoves, heaters and pilot lights and disconnect all electrical motors and appliances before use and until all vapors are gone. If sanding is done, wear a dust mask to avoid breathing of sanding dust. Do not breathe vapors or spray mist. 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 off **quickly** with plenty of soap and water, 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.** **Note: These warnings encompass the product series. Prior to use, read and follow product specific MSDS and label information.**

DS271-0200

SHIPPING

Freight Classification: Paint, Combustible Liquid, UN 1263, PGIII
Flash Point: 100°F (38°C)
Packaging: 1 gallon kit (3.785L) 5 gallon kit (18.925L)
0.80 gallon base 4.0 gallon base
0.20 gallon converter 1.0 gallon converter

Shipping Weight: 4 - 1 gallon kits - 54 lbs. (24.5 kg)
5 gallon kit - 62 lbs. (28.2 kg)

253KXXXX (4/00)
Ad Stock #68645D



Cleveland,
Ohio, U.S.A.
800-654-2616
www.devcoatings.com

ICI Devco Coatings is a member of the ICI Paints World Group

LIMITATION OF LIABILITY: To the best of our knowledge, the technical data contained herein are true and accurate at the date of issuance but are subject to change without prior notice. We guarantee our product to conform to the specifications contained herein. WE MAKE NO OTHER WARRANTY OR GUARANTEE OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE. Liability, if any, is limited to replacement of the product or refund of the purchase price. LABOR OR COST OF LABOR AND OTHER CONSEQUENTIAL DAMAGES ARE HEREBY EXCLUDED.