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DEVVRAN[®] 250

Direct to Metal (DTM) Gloss Epoxy

Cat. # 250KXXXX

PRODUCT DESCRIPTION

Generic: Catalyzed Epoxy Polyamide

General Description: A low VOC, high solids, two component gloss epoxy with excellent adhesion and chemical resistance. Suitable for direct-to-metal, non-immersion applications. Also suitable for use on concrete and masonry surfaces.

DEVVRAN 250 DTM Epoxy can be used as a single coat, high build gloss epoxy coating, or, with the primer and topcoat as a multi-coat application.

Typical Uses: DEVVRAN 250 DTM Gloss Epoxy Coating's high gloss, high film build and low VOC make it a very versatile epoxy which has proven itself in the rail car and container markets (Hopper car lining for dry cargoes). Ideal for structural steel, piping, tanks, and equipment in chemical, fertilizer, power plants, petroleum refineries, pulp and paper mills, water and sewage treatment plants and mining operations.

Can also be used in the hard service areas of correctional facilities, schools, commercial and restaurant kitchens where a high performance architectural coating (HIPAC) is required.

Special Qualifications: Performance alternate for Federal Specifications TT-C-550, TT-C-535B, MIL-C-22750F, and MIL-P-23377F-Type I. Suitable for use on structural surfaces or surfaces where there is a possibility of incidental food contact in commercial food preparation establishments, food processing plants and federally inspected meat and poultry plants. USDA no longer requires or furnishes product certification letters.

FEATURES

Advantages:

- Excellent corrosion protection
- Excellent solvent and chemical resistance – resists splash and spillage of solvents, alkalis, salts, moisture, oils, greases, foodstuffs and detergents
- Cold weather cure – Use cold weather additive for application down to 25°F (-4°C)
- Surface tolerant
- Excellent adhesion to properly prepared, aged coatings
- Low VOC
- Self-priming on steel or masonry
- Abrasion resistance
- High build/high solids coating
- Fills concrete block
- Formulated without lead, chromate, or mercury containing materials
- Apply by brush, roll or spray

Limitations of Use: Exterior exposure will cause a color change, early dulling, and loss of gloss, but this does not affect protective properties. Epoxy coatings may yellow during application and cure if exposed to the combustion by-products of improperly vented fossil fuel burning heaters. Commonly finished with Devoe Coatings DEVTHANE[™] Urethane Enamel for maximum exterior color & gloss retention. Recommended for non-immersion use only.

SPECIFICATION DATA

Color: Green (Primer) 250K5544, White 250K3501; and Black 250K9903

Finish: High Gloss

Reduction Solvent: T-10 thinner - see thinning.

Clean-up Solvent: T-10 thinner

Weight/Gallon: 10.2 lbs./gal. (1.22 kg/L)

VOC (EPA 24): 2.3 lbs./gal. (281 g/L)

Solids By Volume (ASTM D 2697-7 days): (Mixed) 64%
Theoretical Coverage at 1.0 Mil (25 microns) Dry: (1.56 mils wet) – 1027 sq. ft.; (39.0 microns wet) – 25.3 m²/L.

Recommended Film Thickness: Apply at 150-205 sq. ft./gal. (3.68-5.02m²/L) or 8.0-11.0 mils (200-275 microns) wet, to achieve 5.0-7.0 mils (125-175 microns) dry.

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

Service Temperature Limits: 250°F (121°C) dry

Minimum Dry Time (ASTM D 1640): At 6 mils (150 microns) dry - 50% RH.DFT

Substrate Temperature	40°F (4°C)	60°F (16°C)	70°F (21°C)	80°F (27°C)
Minimum Recoat	20 Hours	8 Hours	6 Hours	3 Hours
Dry Hard	42 Hours	16 Hours	9 Hours	5 Hours
Maximum Recoat				
Self	30 Days	30 Days	30 Days	30 Days
229H	20 Days	15 Days	10 Days	10 Days
359, 369, 389	15 Days	10 Days	7 Days	7 Days
378, 379	10 Days	7 Days	5 Days	3 Days

Warning: The above table provides general guidelines only. Always consult your ICI Devoe 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 12 months at 77°F (25°C) - unopened.

Hardness (ASTM D 3363, 7 day cure @ 77°F (25°C): 5H

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

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

Pot Life: 8 hours @ 77°F (25°C) & 50% R.H.

PERFORMANCE DATA

Adhesion: (ASTM D 4541) – Excellent

Salt Spray Resistance: (ASTM B 117) – Excellent

Direct Impact Resistance: (ASTM D 2794) – Good

Abrasion Resistance: (ASTM D 4060) – Excellent

Humidity Resistance: (ASTM D 2247) – Excellent

Exterior Exposure: (45° South – Lt. Industrial) – Very Good (Normal, expected loss of gloss for epoxy coatings)

Chemical Resistance: (ASTM D 1308 – 24 hour contact) – Very Good. 10% & 35% sodium hydroxide, 10% ammonia, crude oil, 10% hydrochloric acid, 5% sodium chloride, 10% ammonium hydroxide, 50% ethanol, gasoline, methanol, xylol.

All results based on testing of DEVVRAN 250 at 6 mils (150 microns) DFT.

GENERAL SURFACE PREPARATION

Surfaces must be dry, clean, free of oil, grease, dust, dirt, wax, soaps, powdery residue, form release agents, curing compounds, laitance, other foreign matter and be structurally sound. Remove all loose paint, mortar spatter, mill scale and rust.

New Surfaces: Steel – Clean and prime with this product. For non-immersion, single coat applications, abrasive blast to near white metal per SSPC-SP10, SSI-Sa2½. The steel profile should be 1½ - 2½ mils in depth and be of a jagged nature as opposed to “peen” pattern. **Concrete Block** – Remove loose aggregate and repair voids. Fill with this product or BLOXFIL® 4000 Heavy Duty Block Filler. **Concrete Floors & Poured Concrete** – Cure at least 30 days. Acid etch or abrasive blast slick, glazed concrete or concrete with laitance. Prime with this product thinned 25% or in accordance with allowable limits permissible by local VOC or air quality regulations. **Drywall, Interior**

Wood & Exterior Wood – Not recommended over these surfaces. **Galvanized Steel** – Remove dirt and oils by solvent cleaning or with Devco Coatings DEVPREP® 88 Cleaner followed by a thorough water rinsing. Prime with DEVRAN 201 Epoxy Primer. For severe moisture condition, grit blasting is recommended prior to priming to establish a surface profile.

Previously Painted Surfaces: DEVRAN 250 can normally be used as a conversion or barrier coat over aged coatings. Old coatings should be tested for lifting. If they lift, remove them. Otherwise scuff sand glossy areas and aged epoxy coatings. Clean aged epoxy or urethane coatings with Devco DEVPREP 88 Cleaner. Remove cracked and peeling paint. Prime bare areas with primer specified under **New Surfaces**. If thinning is required, thin with T-5 Thinner only when used over aged alkyd coatings.

DIRECTIONS FOR USE

Tinting: White is tintable to light pastels with CHROMA-CHEM 844 colorants. (Do not use water based colorants). Add colorants to only the Base portion. Mix thoroughly before adding the Converter portion.

Thinning: Thinning is not normally required or desired; however, at extreme environmental conditions, small amounts (10% or less by volume) of the solvents on the reverse page can be added depending on local VOC and air quality regulations. When using DEVRAN 250 over aged alkyds, use Devco Coatings T-5 Thinner. Any solvent addition should be made after the two components are thoroughly mixed.

Mixing: DEVRAN 250 Coating is a two component product supplied in 10 gallon kits which contain the proper ratio of ingredients. The entire contents of each container must be mixed together. Power mix both portions first to obtain a smooth, homogeneous condition. Then add the converter slowly with continued agitation. After the converter add is complete, continue to mix slowly. Allow the mixed material to stand 15 minutes at 60-80°F (16-27°C) before use. Always stir before use. Mixed material is usable for 8 hours; if it thickens, do not add thinner, but discard and mix fresh material. Higher temperatures will reduce working life of the coating; lower temperatures will increase it. Surfaces coated with this product may become slippery when wet. For additional slip resistance in areas of pedestrian traffic, add one pound per gallon of coarse pumice or other texturing material.

Application: Spray is preferred for appearance and film build control. For air spray application, use a “Mastic” gun, a fluid tip of .070” or larger and an air cap with good break-up. The fluid pressure should be kept low, with just enough air pressure to get good break-up of the coating. Excessive air pressure can cause overspray problems. Where airless equipment is used, an air-

less spray pump capable of 3,000 psi (207 bars) and .019” to .023” 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. Longer hose length may require an increase in pump capacity, pressure, and/or thinning. For touch-up work, DEVRAN 250 Coating may also be applied by brush or roller. Brushing and rolling may require multiple coats to achieve correct film thickness and/or hiding. Care should be taken that proper and uniform thicknesses are obtained. For roller work use a clean synthetic roller with 1/4” - 1/2” nap. New rollers should be thoroughly wet with the specified thinner and spun vigorously to remove loose fibers.

Cold Weather Applications: For substrate temperatures between 40°F (5°C) and 60°F (16°C) cold weather additive 060A0000 may be added. One 1/2 pint container of 060A0000 may be added to the converter portion of a 10 gallon kit of DEVRAN 250. Thoroughly mix the 060A0000 additive in the converter with a power mixer prior to adding the converter to the base portion.

Spreading Rate: Apply at 150-205 sq.ft. per gallon (3.7-5.0 m²/L) depending on surface texture and porosity. Make allowance for any losses due to overspray or surface irregularities.

Topcoats: Can be used as a finish for interior areas. Accepts a variety of topcoats. In interior or exterior areas, DEVTHANE™ Urethane Enamels could be used as a finish to enhance performance and/or appearance.

Dry Time: At 70°F (21°C) & 50% R.H., dries to recoat with epoxy or urethane in 18 hours and dry hard in 24 hours.

Clean-up: Use T-10 Thinner.

PRECAUTIONS

DANGER! FLAMMABLE 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 REACTION. MAY BE HARMFUL IF ABSORBED THROUGH SKIN. OVEREXPOSURE MAY CAUSE BLOOD, LIVER, KIDNEY DAMAGE. CONTAINS CRYSTALLINE SILICA WHICH CAN CAUSE LUNG CANCER AND OTHER LUNG DAMAGE IF INHALED. CONTAINS METHANOL WHICH MAY CAUSE BLINDNESS IF SWALLOWED. POTENTIAL CANCER HAZARD. CONTAINS FORMALDEHYDE WHICH HAS BEEN SHOWN TO CAUSE UPPER RESPIRATORY TRACT CANCER AND ALLERGIC RESPIRATORY REACTION. USE ONLY WITH ADEQUATE VENTILATION. KEEP OUT OF THE REACH OF CHILDREN. NOTICE: This product contains 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.** The contents of these packages must be blended with other components before the product can be used. Any mixture of components will have hazards of all components. Before opening the package, read all warning labels. Follow all precautions. **Note: These warnings encompass the product series. Prior to use, read and follow product-specific MSDS and label information.**

DS266-0200

SHIPPING

Freight Classification: Paint, 3, PG III, UN1263 (Flammable Liquid)
Flash point: 80°F (27°C)
Packaging: 10 gallon kit (37.85L)
 5 gallons (18.925L) base
 5 gallons (18.925L) converter

Shipping Weight: 10 gallon kits - 104.5 lbs. (47.4 kg)

250KXXXX (2/00)
 Ad Stock #68644B



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