

PRODUCT DESCRIPTION

Generic: Advanced Technology Epoxy

General Description: A high performance, multipurpose, surface tolerant, two-component chemically-cured epoxy semi-gloss coating.

Typical Uses: For use on properly prepared steel or masonry surfaces including immersion (non-potable water) service. Ideal for structural steel, piping, storage tank exteriors, machinery, and equipment in petroleum refineries, pulp and paper mills, chemical and fertilizer plants, and sewage treatment plants.

Special Qualifications: Performance alternate for Federal Specifications TT-C-550 and TT-C-545, Mil-P-24441-Type I & II, Mil-C-22750D-Type I, and Mil-P-23377E-Type I, Mil-P-23236B-Type I & IV, Class 2, and Mil-P-24647B. Meets AWWA D102.

SPECIFICATION DATA

Color: Off White, ready-mixed and custom colors

Finish: Semi-Gloss

Reduction Solvent: T-10 Thinner. For application over aged alkyds use T-5 Thinner.

Clean-up Solvent: T-10 Thinner

Weight/Gallon: 11.0 lbs./gal. (1.3 kg/L) – varies with color

VOC (EPA 24): 2.40 lbs./gal. (292 g/L) – varies with color

Solids By Volume (ASTM D 2697 – 7 days): 68% ± 2%

Theoretical Coverage at 1.0 Mil (25 microns) Dry: 1091 sq. ft./gal. (28.0 m²/L)

Recommended Film Thickness: 4.0-8.0 mils (100-200 microns) dry – 5.9-11.7 mils (147-293 microns) wet. (Make allowances for loss due to overspray & irregular surfaces.)

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 5 mils (125 microns) DFT

Temperature	20°F (-7°C)	40°F (4°C)	60°F (16°C)	80°F (27°C)	120°F (49°C)
Minimum Recoat	28 Hours	11 Hours	6 Hours	3 Hours	2 Hours
Dry Hard	46 Hours	18 Hours	9 Hours	5 Hours	3 Hours
Maximum Recoat					
Self	30 Days	30 Days	30 Days	30 Days	3 Days
359DTM,359H,389	7 Days	6 Days	5 Days	5 Days	1 Day
389H,378,378H,					
379UVA,379H,					
224HS,229H					

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: 4(base):1(converter)–see mixing instructions.

Induction: None

Pot Life: 4.5 hours @ 77°F (25°C) & 50% R.H.

FEATURES

Advantages:

- Exceptional corrosion protection
- Suitable for salt & fresh water immersion
- Low temperature cure to 0°F (-18°C)
- Surface tolerant
- Good adhesion to damp surfaces
- Self-priming for steel & masonry substrates
- Fast Recoat
- High solids – high film build
- Low VOC

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 DEVTHANE® Urethane Enamel for maximum exterior color & gloss retention. Do not use for fuel or solvent immersion.

PERFORMANCE DATA

Adhesion: (ASTM D 4541) – Excellent

Salt Spray Resistance: (ASTM B 117) – Excellent

Direct Impact Resistance: (ASTM D 2794) – Very Good

Abrasion Resistance: (ASTM D 4060) – Excellent

Humidity Resistance: (ASTM D 4585) – Excellent

Water Immersion: (ASTM D 1308) – Excellent

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

Hardness: (ASTM D 3363), 7 day cure @ 77°F (25°C) 3H

Chemical Resistance: (ASTM D 1308 – 24 hr. contact) Excellent. Resists splash and spillage of alkalis, salts, moisture, oils, greases, foodstuffs and detergents, 50% Sodium Hydroxide, 28% Ammonia, 5% Trisodium Phosphate, 25% Citric Acid, 25% Lactic Acid, 10% Sulfuric Acid, Crude Oil, 10% Hydrochloric Acid, 20% Tannic Acid, 5% Sodium Chloride, 10% Ammonium Hydroxide, sewage.

Read Label and Material Safety Data Sheet Prior to Use. See other cautions on last page. DSF1-0690

GENERAL SURFACE PREPARATION

Surfaces must be dry, clean, free of oil, grease, form release agents, curing compounds, laitance, other foreign matter and be structurally sound. Remove all loose paint, mortar spatter, mill scale, and rust. **All direct to metal coatings provide maximum performance over near white metal blasted surfaces.** There are situations and cost limitations which preclude blasting. BAR-RUST® 235 epoxy was designed to provide excellent protection over less than ideal surface preparation. The minimum standard for non-immersion service is SSPC-SP2 or ISO-St2; for immersion service the minimum standard is SSPC-SP3 or ISO-St3. **These minimum surface preparation standards apply to steel that has been previously abrasive blasted, coated and deteriorated.** Where very rusty surfaces still remain after cleaning use PRE-PRIME™ 167 Sealer before application of BAR-RUST 235 epoxy. **All direct to metal coatings provide maximum performance over near white blasted surfaces.**

New Surfaces: Steel – Blast to near-white metal surface cleanliness in accordance with SSPC-SP10 or ISO-Sa2 1/2 for immersion service, or commercial blast cleanliness in accordance with SSPC-SP6 or ISO-Sa2 for non-immersion service. Blast profile on steel should be 1.5 to 2.5 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. **Concrete Block** – Remove loose aggregate and repair voids. Fill with this product or TRU-GLAZE-WB™ 4015 blockfiller. **Concrete Floors, Poured Concrete** – Cure at least 30 days. Acid etch or abrasive blast slick, glazed concrete or concrete with laitance. Prime with PREPRIME 167 sealer or this coating. **Galvanized Steel** – Remove dirt and oils by solvent cleaning or with DEVPREP® 88 Cleaner or other suitable cleaner followed by a thorough water rinsing. Prime with DEVRAN® 203 or DEVRAN 205 epoxy primers for non-immersion. For immersion or severe moisture condition, abrasive blasting is recommended before priming with this product or DEVRAN 201 epoxy primer.

Previously Painted Surfaces: Old coatings should be tested for lifting. If lifting occurs, remove the lifted coating. Otherwise scuff sand glossy areas and aged epoxy coatings. Clean aged epoxy or urethane coatings with DEVPREP® 88 Cleaner or other suitable 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. **Use only products that are in compliance with local VOC regulations.**

DIRECTIONS FOR USE

Tinting: Tint the appropriate base with CHROMA-CHEM® 844 colorants. (Do not use water based or other 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 (15% or less by volume) of T-10 thinner can be added depending on local VOC and air quality regulations. When using BAR-RUST 235 epoxy over aged alkyds, use T-5 thinner. Any solvent addition should be made after the two components are thoroughly mixed.

Mixing: BAR-RUST 235 epoxy is a two component product supplied in 5 gallon and 1 gallon kits that 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. Avoid storing or placing containers in direct sunlight.

Application: Spray is preferred for appearance and film build control. For air spray application, use a fluid tip of .070" or larger, a professional grade conventional gun 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 over-spray problems. Where airless equipment is used, an airless spray pump capable of 3,000 psi (207 bars) and .019" to .025" 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. BAR-RUST 235 epoxy may also be applied by brush or roller. 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. Brushing and rolling may require multiple coats to achieve correct film thickness and/or hiding.

Spreading Rate: Apply at 130-250 ft²/gal. (3-6m²/L) depending on surface texture and porosity. Make allowance for any losses due to over-spray or surface irregularities.

Clean-up: Use T-10 Thinner or other appropriate thinner in compliance with local VOC regulations.

PRECAUTIONS

DANGER! COMBUSTIBLE LIQUID AND VAPOR. 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 BLOOD, LIVER, KIDNEY DAMAGE. CONTAINS CRYSTALLINE SILICA WHICH CAN CAUSE LUNG CANCER AND OTHER LUNG DAMAGE IF INHALED. CONTAINS MICA WHICH MAY CAUSE PNEUMOCONIOSIS. 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.** 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. Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation. If sanding, 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:** For skin contact, wash thoroughly with soap and water. If any product remains, gently rub with petroleum jelly, vegetable or mineral/baby oil then wash again with soap and water. Repeat as needed. Remove contaminated clothing. For eye contact, flush immediately with plenty of water for at least 15 minutes. **Get medical attention.** If swallowed, **get medical attention immediately.** If inhalation causes discomfort, remove to fresh air. If discomfort persists or breathing difficulty occurs, get medical attention. **KEEP FROM FREEZING.**

DS238-0706

SHIPPING

Flash Point: 100°F (38°C)
Packaging: 1 gallon kit (3.785L) 5 gallon kit (18.925L)
 0.80 gallon base 4.00 gallon base
 0.20 gallon converter 1.00 gallon converter

Shipping Weight:: 4 - 1 gallon kits - 45 lbs. (20.4 kg)
 5 gallon kit - 56 lbs. (25.4 kg)

235 (05/07)
 Ad Stock #68637F

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