

Product Data Sheet

Product Description

ICO Guard Coating GF is a 100% solids, two-part epoxy coating reinforced with glass flakes for enhanced permeability resistance. It has several significant advantages over conventional vinyl ester tank linings, including no need for special ventilation in confined spaces, superior damp adhesion, and ability to be applied in greater thicknesses per coat on vertical and overhead surfaces. ICO Guard Coating GF has excellent adhesion to damp as well as dry properly prepared concrete and metal surfaces.

ICO Guard Coating GF is available in all of our standard colors in 4 gallon pre-measured kits. It can be applied by brush, roller or spray up to 20 mils per coat at 70°F without sagging. Two 20 mil coats are recommended for optimal permeation resistance in immersion. No primer is required except when coating over rusted metal.

Product Application

ICO Guard Coating GF is designed to protect metal and cementitious substrates subjected to long term immersion conditions where chemical attack can be expected. Typical applications would be clarifiers, settling ponds and filtration tanks found in industrial and municipal waste water treatment facilities, as well as sewer lines, manholes, connector boxes and metal tank linings where chemical concentrations are compatible with our "Guard" product line (see Milamar Chemical Resistance Chart). Maximum reagent temperatures should not exceed 120°F.

Badly pitted or spalled concrete should first be pre-filled with our ICO Gel epoxy patch material prior to coating. For pitted concrete surfaces with exposed aggregate, our 1/8" trowel applied ICO Guard Liner would be the choice, especially in trenches, sumps and pits

Chemical Resistance

ICO Guard Coating GF is appropriate for immersion use when rated "I" in our Chemical Resistance Chart (see "ICO Guard" heading).

Physical Properties

Tensile Strength (ASTM D-638):	4925 psi	60° Gloss	100
Tensile Elongation (D-638):	9%	Gardner Impact Strength:	80 in lbs.
Hardness, Shore D (D-2240):	80	Bond Strength to Quarry Tile:	>1000 psi
		Vapor Transmission Rate (E-96):	0.02 perms

Physical Characteristics

Mixing Ratios	By Volume	By Weight
Part A : Part B	1.6:1	2:1

Density, lbs. /gal.		Viscosity @ 77°F, cps	
Part A:	11.0	Part A:	35,000
Part B:	8.6	Part B:	3000
A&B Mixed:	10	A&B Mixed:	6000

Curing Times	50°F	70°F	90°F
Pot Life:	50 min.	40 min.	20 min.
Work Time:	70 min.	50 min.	25 min.
Tack Free:	28 hrs.	16 hrs.	7 hrs.
Hard:	64 hrs.	30 hrs.	12 hrs.

Maximum chemical and physical properties achieved after 7 days at 70°F

Color Availability

Standard colors: white, gray, dark gray, beige, yellow, red, green, blue, brown, black.

Packaging and Coverage Rates

4 gallon kit: 320 SF

Shelf Life 1 year at 77°F in unopened containers.

Installation

Please refer to our Application Specs for detailed instructions. Particular care must be taken to follow those instructions precisely to assure proper installation.

1. New concrete should be allowed to cure for 28 days. If not possible, then test with plastic sheet for rate of vapor transmission to surface and consult ICO Tech Service for recommendations.
2. Old concrete should be sand blasted to remove all old coating, down to a clean, abraded (40 to 50 grit minimum) surface.
3. Metal surfaces must be blasted to achieve a white metal finish (SSPC-SP-5) with a 2 to 3 mil angular profile. Coating should be applied within 8 hours of completion of prep.
4. No primer is necessary.
5. On worn, spalled concrete, pre-fill with ICO Gel epoxy patch and allow to dry tack free.
6. Mix Part A contents first for at least 30 seconds to ensure uniformity, then add Part B and mix with a slow speed (< 750rpm) jiffy style mixer, or until uniform in color. To prolong pot life, pour out into rolling pans.
7. Apply by brush or ¼" adhesive roller at a coverage rate of 80SF/gal at 70°F (=20 mils DFT). Allow to dry tack free.

8. Material may also be applied with an airless spray apparatus with a 40:1 pump ratio, 3500psi fluid pressure, 0.021" fluid tip and a minimum 3/4" I.D. air input line.

9. Apply a second coat at the same coverage rate as the first. Note that if curing time for first coat exceeds 30 hours at 70°F, it must be sanded prior to applying second coat.

Note: Failure to follow the above instructions, unless expressly authorized by a Milamar Technical Service Representative, will void our material warranty.

Precautions

1. Recoat windows without sanding: regular cure at 70°F: 30 hours.
2. Do not use Guard Coating GF below 50°F.
3. Mix Part A thoroughly to distribute flakes uniformly.

Product Specification

The specified area shall receive an application of ICO Guard Coating GF as manufactured by Milamar Coatings LLC. of Oklahoma City, Oklahoma. The system shall be installed by precisely following the manufacturer's published recommendations pertaining to surface preparation, mixing and application. The material shall be a low odor, solvent-free, 100% solids, glass flake-filled epoxy coating with good resilience to resist thermal and mechanical shock. The system must adhere to damp as well as dry concrete, wood, metal, tile, terrazzo, and sound existing epoxy and urethane coatings. It shall have a maximum permeability rating of 0.2 perms as tested by ASTM E-96. The film hardness shall be a D of 80. The system shall be unaffected by oils, greases and resist such chemicals as 36% hydrochloric acid, 30Shore % nitric acid, 50% sulfuric acid and 50% sodium hydroxide.

The data statements and recommendations set forth in this product information sheet are based on testing, research and other development work which has been carefully conducted by us, and we believe such data. Statements and recommendations will serve as reliable guidelines. However, this product is subject to numerable uses under varying conditions over which we have no control, and accordingly we do NOT warrant that this product is suitable for any particular use. Users are advised to test the product in advance to make certain it is suitable for their particular production conditions and particular use or uses.

LIMITED WARRANTY

Milamar Coatings products are manufactured to be free of defects in material and workmanship in meeting the properties specified on its individual Product Data Sheets. Users and installers of Milamar Coatings products are solely responsible for determining the suitability of the products for specific product applications. Milamar Coatings makes no Warranty or Guarantee, express or implied, including

warranties of fitness, design compatibility or merchantability, for any particular use and shall have no responsibility or liability, including direct, indirect or consequential damages, due to injury, delay or third party claims for installation or repair. Likewise, Milamar Coatings assumes no liability of any nature for products that are adjusted in the field or that do not utilize all specified Milamar Coatings components. Should any Milamar Coatings product be proved to be defective within one year from the date of shipment, Milamar Coatings will, at its sole discretion, either replace the material; issue a credit to the customer's account; or provide a cash refund for the initial, paid purchase price of the material. Potential claims regarding product quality must be received in writing by Milamar Coatings within 30 days of the discovery of such potential defect. This Warranty is exclusive of all other warranties, expressed or implied, and may only be adjusted in writing, signed by an officer of Milamar Coatings, L.L.C.

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