



ICO-GUARD COATING™ Product Data Sheet

Product Description

ICO-Guard Coating™ is a two part, 100% solids, epoxy coating primarily for protecting concrete surfaces in corrosive environments. It is a USDA approved material, with zero VOC's, no odor, and excellent color stability. It is our highest chemical resistant, bisphenol A epoxy coating, resisting moderate to high concentrations of inorganic acids, caustics and some solvents. With a tensile elongation of 9%, it is a flexibilized coating that withstands impact and thermal shock far better than conventional, more brittle epoxy coatings. **ICO Guard Coating** has excellent damp, as well as dry adhesion to most substrates. No primer is needed. It is normally applied 10-20 mils per coat, depending on substrate. Two thinner coats are preferred to one thick coat to minimize entrapped air.

ICO Guard Coating can be ordered in a fast cure version, **ICO Guard Coating FC**, for faster turn around times and for applications down to 40°F, while our **ICO Guard Coating XFC** can cure down to 32°F. Note that both of these fast cure versions, if applied below 50°F, are prone to whitening under hot water wash-downs, so they should be top coated with our more color stable **ICO Ure Guard 100**, polyurethane coating.

Product Application

ICO-Guard Coating™ is normally the top coat used in conjunction with our **ICO Guard** resin system applied by slurry, then seeded to refusal with aggregate to build up to the desired ¼" thickness. It can also be used as an optional top coat over our **ICO Guard 51** trowelled material

when a higher gloss, easier-to-clean surface is desired. Because of this system's excellent resistance to CIP cleaners, as well as its flexibility, it is typically used in food and beverage plants seeing constant high temperature wash-downs with aggressive acids, caustics and sanitizing agents

ICO Guard Coating can also be used on vertical surfaces, such as curbs, pump bases and secondary containment for enhanced corrosion protection. It should not be used for harsher environments like trenches, sumps and industrial waste water facilities; instead, use of our **ICO Guard Liner** applied at ⅛" thick is recommended for long term life. For more porous block walls, our **ICO Glaze** coating system is the preferred choice.

ICO Guard Coating is an excellent re-surfacer for restoring old epoxy floors to a high gloss, easy-to-clean surface. In such cases where the existing floor is bonded well bonded, a 60mil, slurry/broadcast system, consisting of two coats of Guard Coating applied at 20mils per coat, provides an economical means of prolonging the life of worn floors

Chemical Resistance

ICO-Guard Coating™ has excellent chemical resistance to a wide variety of inorganic acids, holding up to 10% acetic, concentrated citric, 37% hydrochloric, 80% lactic, 85% phosphoric and 80% sulfuric acid, as well as most CIP cleaners. See our Chemical Resistance Chart under "**ICO Guard**" for complete chemical resistance.

Physical Properties

Tensile Strength (ASTM D638)	: 1560 psi	Gardner Impact Strength (D-2794)	: 80 in lbs.
Tensile Elongation (D-638)	: 9%	Bond Strength to Quarry Tile	: > 1000psi
Flexural Strength (D-790)	: 4140 psi	Vapor Transmission Rate (E-96)	: .03 perms
Hardness, Shore D (D-2240)	: 80	Water Absorption (D-570)	: 0.2% in 24 hours
60° Gloss	: 100	Taber Abrasion (D-1044)	
		CS17, 1000 g, 1000 cycles	: 105 mg. loss

Physical Characteristics

		Curing Times @		32°F	40°	50°F	70°F	90°F
ICO Guard Coating		Pot Life	-	-	60min	50min	25min	
Density, lbs/gal.		Work Time	-	-	100min	75min	50min	
Pt. A	: 15.4	Tack Free	-	-	28hrs	16hrs	7hrs	
Pt. B	: 8.6	Hard, Foot	-	-	64hrs	30hrs	12hrs	
A&B Mixed	: 13	Hard, Truck	-	-	72hrs	36hrs	16hrs	
Viscosity@77°F, cps		ICO Guard Coating FC		Pot Life	-	20min	15min	-
Pt. A	: 5500	Work Time	-	35min	25min	20min		
Pt. B	: 300	Tack Free	-	16hrs	10hrs	4hrs	-	
A&B Mixed	: 2000	Hard, Foot	-	26hrs	20hrs	8hrs	-	
Mixing Ratios By Vol By Wt		Hard, Truck	-	32hrs	26hrs	12hrs	-	
Pt. A : Pt. B	2.5:1 4.5:1	ICO Guard Coating XFC		Pot Life	20min	15min	15min	-
Pt. A : Pt. B, FC	3.8:1 7:1	Work Time	18min	15min	8min	-	-	
Pt. A : Pt. B, XFC	3.3:1 5.6:1	Tack Free	16hrs	10hrs	5hrs	-	-	
		Hard, Foot	30hrs	21hrs	10hrs	-	-	
		Hard, Truck	36hrs	25hrs	17hrs	-	-	

Color Availability

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

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

Packaging and Coverage Rates

1 gallon kit	:	160 SF
4 gallon kit	:	640 SF
100 gallon drum kit	:	16,000 SF

Installation

Please refer to our **Application Instruction Sheet** for more detailed information.

1. New concrete should be allowed to cure for 28 days; however, if shorter times are necessary, a plastic sheet and calcium chloride test should be taken. Call ICO Tech Service when results are obtained.
2. Floor must be abraded to a minimum 60 to 80 grit size depending on coating thickness and be free of all oils, grease and other impurities. When recoating over old surfaces, all gloss should be removed
3. No primer is necessary; however, if floor is particularly porous, our low viscosity primer, **ICO Primer LV** or **LVFC** can be applied and allowed to dry tack free before applying first coat.
4. The two ingredients should be mixed in the prescribed ratios, using a low speed (<750rpm) jiffy-style mixer. Mix Part A first in its own bucket for about 30 seconds, then add Part B hardener and mix for at least 30-60 seconds at low speeds until uniform in color.
5. Immediately after mixing, pour the contents onto the floor in a ribbon pattern, spread with a notched rubber squeegee to the desired coverage rate, e.g. 160SF/gal for 10 mils, then back-roll with a quarter inch, adhesive type roller. Do not over-roll as this can result in bubble formation.
6. While still wet, broadcast suitable grit into the first coat. This may be back-rolled for obtaining a more uniform texture. Allow to dry tack free.
7. Apply second coat to lock in aggregate and obtain a minimum 20 mil thickness. Note: If only one thick coat can be applied (>15mils), a pin roller should be used to facilitate air release.

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

Precautions

1. **Recoat windows without sanding: Regular Cure at 70°F : 36 hours; Fast Cure at 70°F : 12 hours; XFC at 50°F : 18 hours**
2. **Do not use Guard Coating below 50°F**
3. **Do not use Guard Coating FC below 40°F or above 70°F**
4. **Do not use Guard Coating XFC below 32°F or above 50°F**
5. **If applied below 50°F, Guard Coating FC and XFC will water stain**

Product Specification

The specified area shall receive an application of **ICO Guard Coating™** 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, high gloss flexible epoxy system 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 an elongation of 9% in the unfilled form when tested using ASTM D-638. The film hardness shall be a Shore D of 80. The system shall be unaffected by oils, greases and resist such chemicals as 36% hydrochloric acid, 20% 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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