



# ICO Super Guard

## Product Data Sheet

### Product Description

ICO-Super Guard is a 100% solids, solvent free three part epoxy novolac. It is our highest performing heavy duty flooring system with superior chemical resistance to a wide combination of acids, caustics, and solvents including methylene chloride. Its resin rich, solvent-less formulation enables it to be applied in virtually any thickness down to about 3/16", without need for a sealer or top coat. Such single step applications not only offer significant cost savings over conventional layered systems, they also greatly reduce chances of intercoat adhesion failures.

Super Guard's excellent adhesion to damp, as well as dry substrates, allows it to be applied over less-than 28 day cured concrete, including outside slab on grades. Its improved toughness, compared to more brittle conventional novolacs, leads to superior thermal shock and impact resistance, enabling Super Guard quarter inch trowelled applications to withstand years of heavy traffic. For enhanced crack bridging capabilities, ICO-Super Guard can be applied over our elastomeric membrane material, ICO-Lastic, or reinforced with fiberglass mesh.

### Typical Application

ICO-Super Guard is particularly recommended in truck unloading areas, large tank farms and drum storage areas subjected to moderate to heavy mechanical wear where secondary containment for hazardous materials is mandated by regulatory agencies. Its outstanding chemical resistance makes Super Guard an effective flooring material for acid etching and metal plating lines, as well as for solvent recycling centers, chemical processing plants and other highly corrosive areas.

### Chemical Resistance

ICO-Super Guard is recommended for secondary containment of such chemicals as 30% hydrofluoric acid, 50% hydrogen peroxide, methylene chloride, glacial acetic, acetone and trichloroethylene. A more complete list of chemical resistance is available in the Milamar Coatings Chemical Resistance Chart or contact Milamar Technical Assistance.

### Physical Properties

<b>Tensile Strength (ASTM C-307):</b>	4600 psi	<b>Flammability (D-635):</b>	Self-Extinguishing
<b>Tensile Elongation (C-307):</b>	5.0%	<b>Vapor Transmission Rate (E-96):</b>	.27 perms
<b>Flexural Strength (C-580):</b>	2580 psi	<b>Coefficient of Thermal Expansion (D-696):</b>	5.9x10 <sup>-5</sup> per °F
<b>Compression Strength (C-579):</b>	10300 psi	<b>Gardner Impact (D-2759):</b>	80 in. lbs.
<b>Hardness, Shore D (D-2240):</b>	86	<b>Water Absorption (D-570):</b>	0.2% in 24 hrs.
<b>Bond Strength to Quarry Tile:</b>	>1000 psi	<b>Fracture Toughness (C-399):</b>	980 psi/in ½

### Physical Characteristics

Density, lbs./gal.	
<b>Part A:</b>	9.8
<b>Part B:</b>	9.3
<b>A&amp;B Mixed:</b>	9.7
Viscosity @ 77°F, cps	
<b>Part A:</b>	700
<b>Part B:</b>	1800
<b>A&amp;B Mixed:</b>	1000

Mixing Ratios	By Volume	By Weight
<b>Part A : Part B:</b>	3.7:1	4:1
<b>Aggregate : Liquid</b>	3:1	4.5:1

Curing Times @	50°F	77°F	90°F
<b>Pot Life:</b>	30 min.	30 min.	15 min.
<b>Working Times:</b>	18 min.	15 min.	10 min.
<b>Hard, Foot Traffic:</b>	8 hrs.	4 hrs.	3 hrs.

Maximum hardness and chemical resistance are achieved after 7 days @77°F.

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

### Color Availability

Standard colors: gray, dark gray, beige, red, green, & black.

### Packaging and Coverage Rates

Basic Kit	28 SF at 1/4"
Bulk Pack	280 SF at 1/4"
Drum Kit	2800 SF at 1/4"

### 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 a minimum of 28 days or be checked with a rubber mat or plastic sheet to insure adequate curing time has occurred.
2. All surfaces to be covered should be power washed, shot blasted, acid etched, scarified or sanded to present a clean, sound substrate to which to bond to. The prepared surface should have a pH of 7.
3. The three ingredients should be mixed in the prescribed ratios, using a low speed paddle-type mixer (maximum 750 rpm), until uniform in color and consistency.
4. Do not mix less than the prescribed amount of any ingredient or add any solvent to the mix.
5. Super Guard is a self-priming mix. However, to reduce chances for out gassing, seal the concrete with ICO-Primer LV or FC prior to application. Allow to dry.
6. The prepared mix may be spread using screed strips, pin screeds, gauge rakes or notched trowels to insure a nominal 1/4" average depth.
7. Allow the rough spread material to set a few minutes before finish troweling to allow the resin to come to the surface which facilitates the smoothing action of the trowel.
8. After the finish troweling the surface may be back rolled with a short nap roller to remove blemishes. The roller can be slightly damp with isopropyl alcohol to prevent pickup.
9. A suitable aggregate may be broadcast onto the surface after back rolling to provide more anti-slip profile to the finished surface. It is advisable to test various types and sizes of aggregate to achieve the desired finish profile.

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

### Precautions

1. **This is a very fast reacting product. Do not leave in bucket – dump immediately on floor and spread.**
2. **A severe skin and eye irritant. Consult MSDS before use. Rinse immediately if skin contact.**
3. **Do not apply below 50°F.**

### Product Specification

The specified area shall receive an application of ICO Super Guard as manufactured by Milamar Coatings LLC of Oklahoma City, OK. 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, three part, solvent-free 100% solids epoxy novolac with moderate resilience to resist thermal and mechanical shock. It should be trowel applied normally at 1/4" thickness in one application without needing a top coat. It shall be a resin-rich mix ratio of 3.3:1, ICO-Fill aggregate to resin and hardener by volume. The compressive strength when tested in accordance with ASTM C-570 shall not exceed 10300 psi. Tensile strength shall be 4600 psi as measured against ASTM C-307. It shall have a fracture

toughness of 980 psi/in<sup>1/2</sup> as measured by ASTM C-399 and a Gardner Impact Strength of 80 in - lbs. as measured under ASTM D2794. It shall be water wipe-able and have excellent adhesion to wood, metal, tile, brick and damp as well as dry concrete. The system shall be unaffected by oils and greases and be able to contain for at least 72 hours such acids as 98% sulfuric, glacial acetic, and 88% lactic acids; caustics such as 50% sodium hydroxide and solvents such as methylene chloride, acetone, trichloroethylene, tetrahydrofuran and N-Methyl Pyrolidone.

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 numerous 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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