

ICO-HI GUARD SL™

Product Description

ICO-Hi Guard SL™ is a three part, solvent-free, 100% solids, novolac epoxy flooring resurfacer. Normally applied between 1/16" and 1/8" thick in a single step application, **Hi Guard SL™** quickly and economically restores pitted and damaged concrete floors to a smooth and glossy finish. It has excellent chemical resistance to caustics, many concentrated acids and some solvents. The superior toughness of **Hi Guard SL™** allows for better resistance to thermal and mechanical shock compared to harder, more brittle conventional materials.

Its resin rich mix allows for a single step application without need of a sealer coat. If an anti-slip texture is desired, a thin top coat of **Hi Guard Coating™** can be applied and then broadcast with fine silica quartz or aluminum oxide. **Hi Guard SL™** has excellent adhesion to damp as well as dry concrete, metal, wood, brick and tile.

Typical Application

ICO-Hi Guard SL™ is an ideal system for restoring lightly or moderately pitted substrates in high corrosion areas, like chemical plants, plating operations, paper and pulp mills, laboratories and mining operations. Its superior adhesion to damp, as well as dry concrete, along with its excellent impermeability to moisture makes it suitable material for outside use, even on slab-on-grades. Applied as a self leveling/seed system and top coated with **Hi Guard Coating™**, **Hi Guard SL™** can provide an economical, slip resistant, high build flooring system for heavy wear areas.

Chemical Resistance

ICO-Hi Guard SL™ is recommended for such acids as 98% sulfuric, 85% phosphoric, 50% lactic and 20% acetic, as well as concentrated alkalis and many solvents, including ethanol and perchlorethylene. A more complete list of chemical resistance is available in the **International Coatings Chemical Resistance Chart** or contact **ICO Technical Assistance**.

Physical Properties

Tensile Strength	(ASTM C-307)	:2305 psi	Flammability	(D-635)	:Self Extinguishing
Tensile Elongation	(C-307)	:14%	Vapor Transmission Rate	(E-96)	:.03 perms
Flexural Strength	(C-580)	:3670 psi	Coefficient of Thermal Expansion	(D-696)	:1.7 x 10 ⁻⁵ per °F
Compression Strength	(C-579)	:6940 psi	Gardner Impact	(D-2794)	:120 in lbs.
Hardness, Shore D	(D-2240)	:80	Water Absorption	(D-5790)	:0.2% in 24 hours
Bond Strength to Quarry Tile		:>1000 psi	Taber Abrasion CS17, 1000 g. 1000 cycles		: 110 mg. loss

Physical Characteristics

Density, lbs/gal.

Pt. A	10.75
Pt. B	8.8
A&B Mixed	10.1

Mixing Ratios

Pt. A : Pt. B	
Aggregate : Liquid	

By Volume

2.2 : 1
1 : 1.1

By weight

2.5 : 1
1.4 : 1

Viscosity@77°F, cps

Pt. A	600
Pt. B	600
A&B Mixed	600

Curing Times @

	50°F	77°F	90°F
Pot Life	35 min.	25 min.	20 min.
Work Time	25 min.	35 min.	25 min.
Hard, Foot Traffic	24 hrs.	14 hrs.	7 hrs.

Shelf Life

1 year at 77°F in unopened containers.

Maximum Hardness achieved after 7 days @77°F.

Color Availability

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

Packaging and Coverage Rates

Basic 4 gallon Kit	50 SF at 1/8" depth
	100 SF at 1/16" depth

Installation

Please refer to our Installation Guide for detailed instructions. Particular care must be taken to follow those instructions precisely to assure proper installation. Do not apply on floors with slopes of greater than 1/8" per foot. Do not apply below temperature of 50°F.

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. Cracks 1/8" wide or greater, pour joints and construction joints must be cleaned and filled with **ICO-Grout BL™** or **ICO-Gel™**. Patch all holes over 1/2" deep with **ICO-Patch™**, smaller holes can be filled with a slurry mix of **ICO Primer SL** and sand.
4. **ICO-HI Guard SL** is a self-priming mix; however, any substrate of above average porosity should first be sealed with **ICO-Primer LV** or **ICO-Primer LV FC**.
5. The three ingredients should be mixed in the prescribed ratios, using a low speed mixer (maximum 750 rpm), until uniform in color and consistency.
6. Do not add solvent to the mix.
7. Apply **ICO-HI Guard SL™** with a gauge rake, notched rubber squeegee or steel trowel. Use porcupine roller to help level the floor and break up air bubbles.
8. For an anti-slip surface, allow **ICO-HI Guard SL™** to dry, apply a top coat of **ICO-HI Guard Coating™** and broadcast in silica sand.

Precautions

Avoid skin contact with liquid Part A and Part B as they may cause skin irritation to some people. Protective hand creams and/or gloves should be used. Cleanup can be done with hot soapy water before the material starts to set. Once the material has set it can be removed with a paint stripper.

Product Specification

The specified area shall receive an application of **ICO-HI Guard SL™** as manufactured by **International Coatings, Franklin Park, Illinois**. 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 novolac epoxy system with moderate resilience to resist thermal and mechanical shock. It should be applied by notched trowel or squeegee in one application without needing a top coat. It shall be a resin-rich mix ratio of 1:1.1, **ICO-Fill™** aggregate to resin and hardener. It shall have an elongation of 14.0% when tested using ASTM C-307 and Gardner Impact of 120 inch pounds. The compressive strength when tested in accordance with ASTM C-579 shall not exceed 7000 psi and the hardness shall not exceed 80 (Shore D). It shall 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 have high chemical resistance against acids such as 30% chromic, 98% sulfuric, 85% phosphoric and 20% acetic, as well as resist such caustics as 50% sodium hydroxide and 26% ammonium hydroxide.

Technical Assistance

Our many years of installation experience enable us to provide valuable input on not only proper material selection but also installation techniques that will help assure your satisfaction. We have qualified personnel to inspect your floors, analyze the cause of the problems and design procedures and specifications to prolong the useful life of your floors. We furnish detailed application specifications including drawings of necessary details to be used. We are prepared to offer job site instruction for your in-house maintenance crews or to work closely with your preferred applicator. We can also furnish a list of our network of **ICO**-trained certified applicators.

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.

WARRANTY - All products manufactured by us are warranted to be first class material and free from defects in material and workmanship.

Liability under this warranty is limited to the net purchase price of any such products proven defective or, at our option, to the repair or replacement of said products upon their return to us transportation prepaid. All claims hereunder on defective products must be made in writing within 30 days after the receipt of such products in your plant and prior to further processing or combining with other materials and products. WE MAKE NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE SUITABILITY OF ANY OF OUR PRODUCTS FOR ANY PARTICULAR USE, AND WE SHALL NOT BE SUBJECT TO LIABILITY FROM ANY DAMAGES RESULTING FROM THEIR USE IN OPERATIONS NOT UNDER OUR DIRECT CONTROL.

THIS WARRANTY IS EXCLUSIVE OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, AND NO REPRESENTATIVE OF OURS OR ANY OTHER PERSON IS AUTHORIZED TO ASSUME FOR US ANY OTHER LIABILITY IN CONNECTION WITH THE SALE OF OUR PRODUCTS.



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