

## ICO-HI GUARD LINER

### Product Description

**ICO-Hi Guard Liner™** is a three-part, aggregate filled novolac epoxy liner material for vertical concrete and masonry surfaces. With an identical resin base to our **Hi Guard** product line, it offers excellent chemical resistance to concentrated inorganic acids, caustics and some solvents. Normally applied in a single pass up to one eighth inch thickness, **Hi Guard Liner** provides an impervious vapor barrier. With excellent damp, as well as dry adhesion, it can be applied on slab-on-grades or even below grade. It is a resin rich mixture and thus, does not require a primer nor a top, "sealer" coat. By backrolling the newly applied product, a high gloss, easy-to-clean surface is obtained.

### Typical Application

**ICO-Hi Guard Liner** is particularly suited for use in such highly corrosive areas as trench walls, sumps, pits, waste water treatment tanks and other concrete or masonry surfaces that see a more sustained contact with corrosive chemicals and thus would prove too severe an environment for thin film coatings. It is excellent for smoothing out mildly eroded concrete in a single step. For badly spalled concrete, a first layer of **ICO Gel**, followed by **ICO Hi Guard Liner**, is more practical.

### Chemical Resistance

**ICO-Hi Guard Liner** is recommended for containment of concentrated inorganic acids, such as 98% sulfuric, 85% phosphoric, citric, and lactic, caustics and some solvents. For detailed information, please refer to our **Chemical Resistance Chart** under the **Hi Guard** heading.

### Physical Properties

Tensile Strength (ASTM C-307)	:1285 psi	Flammability (D-635)	: Self Extinguishing
Tensile Elongation (C-307)	: 5%	Vapor Transmission Rate (E-96)	: 0.07 perms
Flexural Strength (C-580)	: 1940 psi	Coefficient of Thermal Expansion (D-696)	: 5.9 x 10 <sup>-5</sup> per °F
Compression Strength (C-579)	: 6165 psi	Gardner Impact (D-2794)	: 160 inch pounds
Bond Strength to Quarry Tile	: >1000 psi	Water Absorption (D-570)	: 0.1% in 24 hours

### Physical Characteristics

#### Density, lbs/gal.

Pt. A : 9.8  
Pt. B : 8.8  
A&B Mixed 9.5

#### Mixing Ratios

Pt. A : Pt. B  
Aggregate : Liquid

#### By Volume

2:1  
1.5:1

#### By weight

2.2:1  
2.1:1

#### Viscosity@77°F, cps

Pt. A : 450  
Pt. B : 600  
A&B Mixed 500

#### Curing Times @

	50°F	77°F	90°F
Pot Life	35 min.	30 min.	25 min.
Work Time	35 min.	45 min.	30 min.
Hard, No Indentation	24 hrs.	10 hrs.	5 hrs.

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

Maximum hardness achieved after 7 days @77°F.

### Color Availability

All standard colors, except white

### Packaging and Coverage Rates

3 Gallon Kit	:	40 SF @ 1/8"
Bulk Pack	:	400 SF @ 1/8"

## 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 below a substrate temperature of 50°F.

1. New concrete should be allowed to cure a minimum of 28 days, or alternatively, to be checked for moisture with a rubber mat or plastic sheet prior to coating.
2. All surfaces to be covered should be cleaned and abraded by sand blasting, grinding, and/or power washed.
3. Fill any spalled areas deeper than 1/8" with **ICO Gel** and allow to dry.
4. **Hi Guard Liner** is a self-priming material; however, ease of installation can be facilitated by applying **ICO Primer LV** and broadcasting in grit.
5. The liquid Part A resin and Part B hardener should be mixed in a paddle-style mixer, then add **ICO Fill Liner** mix and the bag of **ICO Thickener** and mix for another minute, or until uniform.
6. Trowel apply in thickness up to one eighth inch per pass. If slumping occurs, add additional **ICO- Thickener**.
7. Back roll the still-wet finished surface with a fine nap roller, dipped in toluene or isopropyl alcohol to obtain a uniform finish. No sealer coat is required.

## Precautions

**WARNING:** 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 Liner** as manufactured by **International Coatings, Franklin Park, Illinois**. The material shall be a 100% solids, low odor, three part Bisphenol F epoxy. It shall have an elongation of 5.0% and a tensile strength of 1285 psi when tested under ASTM C-307. It shall have a Gardner Impact Strength of 160 inch pounds. It shall be a resin-rich mixture with the aggregate: resin ratio not exceeding 1.5:1 by volume. The system shall withstand full immersion in such chemicals as 98% sulfuric acid, 85% phosphoric acid, concentrated citric and lactic acids at room temperature.

## 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.

## Mission Statement

**Our mission is to provide our customers the highest possible quality products and services and by so doing, build long term relationships based on mutual trust and respect.**

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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