

ICO-LINER

Product Description

ICO-Liner™ is an aggregate-reinforced, trowelled-on epoxy liner material for vertical surfaces. It is our highest chemical resistant material, similar to our **Super Guard** product line, with excellent resistance to concentrated acids, caustics and most solvents, including methylene chloride. It is solvent-free, and can be applied in a single pass up to one eighth inch thick. Because of its resin-rich nature, **ICO-Liner** can be backrolled to achieve a smooth, high gloss finish without need of a sealer coat. **ICO-Liner** can withstand constant immersion temperatures of 212°F and intermittent exposure up to 250°F.

Typical Application

ICO-Liner is used for resurfacing and protecting vertical concrete and masonry surfaces, both inside and outside. It is particularly recommended for trenches, sumps, and pits that are constantly exposed to corrosive chemicals. It is also effective in providing permanent protection to badly spalled and pitted concrete walls that could not be effectively sealed by application of a thin coat. Where thicknesses greater than one-eighth inch are required, it can be applied in multiple passes.

Chemical Resistance

ICO-Liner is recommended for areas subjected to such chemicals as 98% sulfuric, 50% hydrogen peroxide, and 85% phosphoric acid, acetone, methylene chloride, and trichlorethylene. A more complete list of chemical resistances is available in the **International Coatings Chemical Resistance Chart** under "**Super Guard.**"

Physical Properties

Tensile Strength (ASTM C-307)	:4600 psi	Flammability (D-635)	:Self Extinguishing
Tensile Elongation (C-307)	:5.0%	Vapor Transmission Rate (E-96)	:.27 perms
Flexural Strength (C-580)	:2580 psi	Coefficient of Thermal Expansion (D-696)	:5.9 x 10 ⁻⁵ per °F
Compression Strength (C-579)	:10,300 psi	Gardner Impact (D-2794)	:80 in lbs.
Hardness, Shore D (D-2240)	:86	Water Absorption (D-570)	:0.2% in 24 hours
Bond Strength to Quarry Tile	:>1000 psi	Taber Abrasion (D-1044)	:66 mg loss
		CS17, 1000g, 1000 cycles	

Physical Characteristics

Viscosity@77°F, cps

Pt. A	700
Pt. B	1800
A&B Mixed	1000

Density, lbs/gal.

Pt. A	9.8
Pt. B	10.3
A&B Mixed	10.0

Shelf Life

1 year at 77°F in unopened containers.

Mixing Ratios

Pt. A : Pt. B	
Aggregate : Liquid	

By Volume

4.2 : 1
1.3 : 1

By weight

4 : 1
2 : 1

Curing Times @

Pot Life	30 min.
Hard, No Indentation	8 hrs.

50°F

30 min.
8 hrs.

77°F

30 min.
4 hrs.

90°F

15 min.
3 hrs

Maximum hardness achieved after 7 days @77°F.

Color Availability

Standard colors: Dark gray, gray, red, brown, black.

Packaging and Coverage Rates

1 Gallon Kit	13 SF @ 1/8" thickness
3 Gallon Kit	40 SF @ 1/8" thickness
Bulk Pack	400 SF @ 1/8" thickness

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 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. Fill any deep (>1/4") holes with **ICO-Gel** and allow to dry before coating.
4. **ICO-Liner** is a self-priming material. To prevent outgassing, prime with **ICO-Primer LV** and allow to dry. Apply a second coat of **ICO-Primer LV** and allow to tack up.
5. The three ingredients should be mixed in the prescribed ratios, using a low speed mixer (750 rpm) until uniform in color and consistency.
6. Do not add any solvent to the mix.
7. Trowel apply in thickness of one eighth inch or less per pass. If slumping occurs, add additional **ICO- Thickener**.
8. If greater thicknesses are required, wait for the base coat to become tacky (about 1 hour @ 77°F) and then apply a second coat.
9. Back roll the still-wet finished surface with a fine nap roller, dipped in toluene or IPA to obtain a uniform finish. No sealer coat is required.

Precautions

WARNING: Severe skin and eye irritants. Use protective clothing, gloves and face shield, along with protective creams, during mixing. Rinse off any material immediately. For further details, refer to Material Safety Data Sheet. Clean-up can be done with toluene, xylene or mineral spirits. Once the material has set it can be removed with a paint stripper.

Product Specification

The specified area shall receive an application of **ICO-Liner** 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 epoxy novolac designed for filling and smoothing rough and pitted vertical surfaces. It shall have an elongation of 5.0% and a tensile strength of 4600 psi when tested using ASTM C-307. It shall have a bond strength to quarry tile of at least 1000 psi and a Gardner Impact Strength of 80 inch pounds. It should be trowel applied in thickness up to 1/8" in one application without sagging. It shall be a mix ratio of 1.3:1 by volume of graded aggregate to resin and hardener and have excellent adhesion to tile, brick and damp as well as dry concrete. The system shall be unaffected by oils and greases and have high chemical resistance against such acids as 36% hydrochloric, 98% sulfuric, 85% phosphoric and 88% lactic. It shall resist such caustics as 50% sodium hydroxide, 26% ammonium hydroxide and also be unaffected by methanol, acetone and methylene chloride.

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 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.

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.



2925 Lucy Lane • Franklin Park, IL 60131 • 847.451.0279 • 800.624.8919 • FAX 847.451.0379

E-Mail: Info@InternationalCoatings.com • www.InternationalCoatings.com