

ICO-GUARD LINER

Product Description

ICO-Guard Liner™ is an aggregate-reinforced, low odor, trowelled-on epoxy liner material for vertical applications. It has excellent chemical resistance to most C.I.P. cleaners, acids, caustics, lubricating oils, and greases found in food processing plants. Because of its non-shrink properties, it can be applied in one eighth inch thickness per pass, without need for glass cloth reinforcement. As a resin-rich material, **ICO Guard Liner™** can be back rolled eliminating the need for a finish "sealer" coat.

ICO-Guard Liner™ can withstand temperatures either wet or dry, up to 212°F without appreciable loss of physical properties. With an elongation of 10%, it can take extreme thermal shock conditions without cracking or delaminating. **ICO-Guard Liner™** has excellent adhesion to damp, as well as dry concrete, brick and tile, metal and wood surface.

Typical Application

ICO-Guard Liner™ is most effective in protecting trenches, sumps and containment pits in food processing facilities, where elevated temperatures and harsh cleaners or acids would attack thin film barriers or less chemically-resistant liners. Its enhanced flexibility and toughness lessen the chances of any premature failures due to thermal or mechanical shock, compared to more brittle conventional epoxies and glass reinforced polyester. For application temperatures between 32°F and 50°F, specify **ICO-Guard Liner FC™**.

Chemical Resistance

ICO-Guard Liner™ is particularly recommended for areas subjected to such chemicals as 50% sulfuric, 30% nitric, 20% lactic, and 30% phosphoric acid, caustic and chlorine cleaners, and some solvents. A complete list of chemical resistances is available in the **International Coatings Chemical Resistance Chart** under "ICO-Guard".

Physical Properties

Tensile Strength (ASTM C-307)	: 1810 psi	Flammability	(D-635): Self Extinguishing
Tensile Elongation (C-307)	: 10%	Vapor Transmission Rate	(E-96) : .03 perms
Flexural Strength (C-580)	: 1760	Coefficient of Thermal Expansion	(D-696) : 1.7 x 10 ⁻⁵ per °F
Compression Strength (C-579)	: 6170 psi	Gardner Impact	(D-2794): 120 in-lbs.
Hardness, Shore D (D-2240)	: 80	Water Absorption	(D-570) : 0.2% in 24 hrs
Bond Strength to Quarry Tile	: >1000 psi		

Physical Characteristics

Density, lbs/gal.	Mixing Ratios	By Volume	By Weight
Pt. A : 9.5	Pt. A : Pt. B	2.1:1	2.2:1
Pt. B : 8.6	Aggregate : Liquid	1.3 :1	2:1
A & B Mixed : 9.2			

Viscosity@77°F, cps	Curing Times @	32°F	50F	77°F	90°F
		Pt. A : 700	Guard Liner Pot Life	----	60min
Pt. B : 300	Guard Liner Hard, Foot Traffic	----	24hrs	15hrs	5hrs
A&B Mixed : 630	Guard Liner FC Pot Life	50min	45min	30min	----
	Guard Liner FC Hard, Foot Traffic	28hrs	14hrs	3hrs	----

Shelf Life 1 year at 77°F in unopened containers

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

Color Availability

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

Packaging and Coverage Rates

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

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. Fill any deep (>1/4") holes with **ICO-Gel** and allow to dry before coating.
4. **ICO-Guard Liner** is a self-priming material: however, ease of installation can be increased by applying **ICO Primer LV** and broadcasting in grit..
5. The three ingredients should be mixed in the prescribed ratios, using a low speed paddle-style mixer (<750 rpm) until uniform in color and consistency.
6. Do not add any solvent to the mix.
7. If greater thicknesses are required, wait for the base coat to become tacky (about 3-4 hours @ 77°F) and then apply a second coat.
8. 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.

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

Precautions

1. **Minimum application temperatures: Regular Cure – 50°F; Fast Cure – 32°F**
2. **Do not apply greater than 1/8" per pass**
3. **Prefill bugholes with ICO Gel to help prevent outgassing**
4. **Can slump in hot conditions; add extra thickener (or cabosil)**
5. **Do not use Fast Cure version above 65° to 70°F**

Product Specification

The specified area shall receive an application of **ICO-Guard 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 designed for filling and smoothing rough and pitted vertical surfaces. It shall have an elongation of 10.0% and a tensile strength of 1810 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 120 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, 80% sulfuric, 85% phosphoric and 20% nitric. It shall resist such caustics as 50% sodium hydroxide, 26% ammonium hydroxide and also be unaffected by C.I.P. Cleaners.

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 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.



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