



# LinerGard 100C

2 COMPONENT EPOXY

## DESCRIPTION:

A two-component, solvent-free, self priming, moisture insensitive epoxy system. Specifically designed for the protection of sanitary manholes, wet wells, and valve vaults. It has a unique high modulus of elasticity which allows for structural bonding of dry and damp materials free of hydrostatic pressure.

## TYPICAL USES:

LinerGard 100C has been formulated primarily to protect the interior and exterior of manholes, lift stations, and valve vaults against the damaging chemicals prevalent in water and sewer treatment environments.

## ADVANTAGES

LinerGard 100C is a 100% solids, low odor amine cured modified epoxy. It is unaffected by the presence of moisture during cure. It has outstanding resistance to most organic and inorganic acids, and provides excellent adhesion to most substrates.

## PHYSICAL PROPERTIES

|                            |                        |
|----------------------------|------------------------|
| <b>MIX RATIO</b>           | 1 to 1 by volume       |
| <b>COLOR/MIXED</b>         | White                  |
| <b>POT LIFE, 200 grams</b> | 70 min. @ 25°C         |
| <b>GENERIC TYPE</b>        | Amine-cured epoxy      |
| <b>SOLIDS BY VOLUME</b>    | 100%                   |
| <b>VOC</b>                 | 0 lbs./gal.            |
| <b>VISCOSITY @ 25°C</b>    | 13,500 cps             |
| <b>COVERAGE per GAL.</b>   | 1600 sq ft/gal @ 1 mil |
| <b>NUMBER OF COATS</b>     | 2 coats recommended    |
| <b>THICKNESS/COAT</b>      | 20 Mils minimum        |
| <b>FLASH POINT</b>         | 450°F                  |
| <b>TENSILE STRENGTH</b>    | 8,900 psi              |
| (ASTM D-638)               |                        |
| <b>FLEXURAL STRENGTH</b>   | 13,600 psi             |
| (ASTM D-790)               |                        |
| <b>FLEXURAL MODULUS</b>    | 1.3 x 105 psi          |
| (ASTM D-790)               |                        |
| <b>TENSILE ELONGATION</b>  | 4%                     |
| (ASTM D-638)               |                        |
| <b>THINNING</b>            | Not required           |

## CURING PROPERTIES

|                  |              |            |
|------------------|--------------|------------|
| <b>POT LIFE:</b> | @ 50°-60° F  | 2-1.5 Hrs  |
|                  | @ 60°-80° F  | 1-1.5 Hrs. |
|                  | @ 80°-100° F | 1-2 Hrs.   |
| <b>DRY TIME:</b> | @77° deg.F   |            |
|                  | To touch     | 8 hrs.     |
|                  | Recoat (min) | When firm  |
|                  | Recoat (max) |            |
|                  | 50°-60° F    | 16-72 hrs. |
|                  | 60°-80° F    | 12-18 hrs. |
|                  | 80°-100° F   | 8-12 hrs.  |

**TEMPERATURE RESISTANCE (dry)** -30-200°F

**SAFETY:** This product and any recommended thinners contains solvents and/or other chemical ingredients. Refer to "material Safety Data Sheets" for complete information on safety and handling. Take these precautions during application and before coating dries.

Avoid breathing of vapor or spray mist. Avoid contact with eyes and skin, Use a barrier cream on exposed skin. Wash thoroughly after handling. In case of spillage, absorb and dispose of in accordance with local applicable regulations. Do not take internally.

### **KEEP OUT OF REACH OF CHILDREN**

Use with adequate ventilation during application and drying. In tanks and other confined areas, use only with adequate forced air ventilation to prevent dangerous concentrations of vapors which could cause death from explosion or from breathing. Use fresh air masks, clean protective clothing and explosion-proof equipment. Follow OSHA regulations regarding ventilation and respiratory equipment.

**IMPORTANT!** Any mixture of Components A and B will have hazards of BOTH Components.

### **PILGRIM PERMOCOAT**

Main office and factory: 402 S. 22nd Street, Tampa, FL 33605 (813) 248-3328 FAX# (813) 248-1076  
Distribution : USA, Canada, Caribbean

## APPLICATION INSTRUCTIONS

**LIMITATIONS:** Apply only in good weather, when air and surface temperatures are above 50F and surface temperatures is at least 5 degrees above wet bulb temperature reading. For optimum application properties, maintain product in heated storage between 70 and 90F, or bring this material to this temperature range prior to mixing and application. Dew or rain on Pilgrim LinerGard 100C while uncured may impair its cure and adhesion of subsequent coats.

**SURFACE PREPARATION:** Prepare and paint only clean, dry surfaces.

**Steel** - Prepare surface in accordance with Steel Structures Painting Council Specification No. 10 "Near White Blast Cleaning" (SSPC-SP 10-63T). Use proper type and size abrasive to attain an average profile depth of 2.0 mils. Do not reuse sand or flint abrasives. Grit or shot abrasives must be cleaned of contamination before reuse. Blow dust and grit from surface with clean, dry air. Coat within 8 hours and before rust or contamination occurs. Apply Pilgrim LinerGard 100C as specified directly to properly cleaned steel or over recommended Pilgrim primers. For immersion service, round all welds, sharp edges to a smooth curve and remove all weld spatter before blast cleaning.

**Concrete** - Surfaces shall be clean, dry, properly cured and free from curing compounds, oil, grease, dirt, chemical contaminant's, waxes or previously applied coatings which are not compatible. Brush blast to provide an etched surface and to remove contaminant's and laitants. Remove dust before coating. Apply Pilgrim LinerGard 100C as specified.

**Aluminum and Galvanized** - Remove all oil, grease and other contaminant's, then lightly brush blast or etch with specified pretreatment. Prime with recommended primer, then apply Pilgrim LinerGard 100C.

**MIXING:** (Ratio 1:1, by Volume) - Agitate Part A with a Jiffy Mixer. A few minutes mixing will reduce the viscosity of the material. THEN add the B Component and thoroughly blend into Part A with Jiffy Mixer for two to three minutes. Allow to stand a minimum of five minutes before application. Usable life of mixed material is function of material temperature. Use within time/temperature limits given in Pot Life section.

**THINNING:** Generally not required. Thin with Pilgrim 111 or #5.

**APPLICATION:** Spray application is preferred to obtain optimum film build and uniformity. Can be brushed for touchup in small areas or roller applied, but may require multiple coats to attain specified film thickness. Apply PilgrimLinerGard 100C at 20 mils minimum.

**APPLICATION EQUIPMENT:** As recommended or equal. Brush - inexpensive 4" wide commercial brushes with short hair bristle. Roller - Inexpensive 7" to 14" length short-nap mohair cover. Airless Spray - Pump - Graco Bulldog (30:1) or equal. Line pressure - 70-90 psi. Tip- 23-31 mil, reversible. Tip filter- none. Manifold filter- none or 30 mesh. Hose- 3/8" or 1/2"i.d., high pressure.

**Time Between Coats** - Where two coats of Pilgrim LinerGard 100C are required to achieve the recommended film build, the interval between coats should be as short as possible. To insure maximum inter-coat adhesion it is recommended that: (1) The next coat be applied as soon as possible - after the previous coat is firm. (2) If the previous coat has cured beyond the maximum recoat time given in Drying Time section, uniformly abrade the surface by brush blasting under low pressure to provide an adequate mechanical bond before recoating.

**Final Curing Times** (Following application of last coat) - For immersion service, 72 hours at 77F or higher; for abrasion conditions (pile driving, etc.) minimum 7 days at 77F or higher. Cure times are proportionately shorter at elevated temperatures and longer at lower temperatures.

**CLEANUP:** Clean all equipment immediately after use with Pilgrim #5 or xylene. It is good working practice to periodically flush out spray equipment during the course of the working day.

**CONTINUITY TEST** (when required) - A non-destructive (100 volts or less) holiday detector should be used to check continuity of dried film. A suitable type is Tinker-Razor Model M-1. Holiday areas should be sanded or brush blaster, then spot coated over abraded areas only.

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### KEEP OUT OF REACH OF CHILDREN

Use with adequate ventilation during application and drying. In tanks and other confined areas, use only with adequate forced air ventilation to prevent dangerous concentrations of vapors which could cause death from explosion or from breathing. Use fresh air masks, clean protective clothing and explosion-proof equipment. Follow OSHA regulations regarding ventilation and respiratory equipment.

**FIRST AID:** In case of skin contact, wash thoroughly with soap and water; for eyes, flush immediately with plenty of water for 15 minutes and call a physician. If affected by breathing of vapor, move to fresh air. If swallowed, call a physician immediately. Do not induce vomiting.

**IN CASE OF FIRE:** Use dry chemical, foam, water fog or CO2.

**IMPORTANT!** Any mixture of Components A and B will have hazards of BOTH Components.

# LinerGard 100c

## Chemical Resistance

| <u>AGENT</u>  | <u>% WEIGHT INCREASE (DECREASE)</u> |
|---|-------------------------------------|
| Methylated Spirits                                      | 0.514                               |
| Distilled Water   | 0.09                                |
| 10% Aq. Sulfuric Acid (H <sub>2</sub> SO <sub>4</sub> ) | 0.136                               |
| 70% Aq. Sulfuric Acid (H <sub>2</sub> SO <sub>4</sub> ) | 4.10                                |
| Gasoline - 90 Octane                                    | 0.01                                |
| 30 wt. SAE Motor Oil                                    | 0.02                                |
| Isopropyl Alcohol                                       | 0.11                                |
| Salt Water - 5%   | 0.10                                |
| 20% Nitric Acid (HNO <sub>3</sub> )                     | 2.7                                 |
| 10% Sodium Hydroxide (NaOH)                             | 0.086                               |
| 50% Sodium Hydroxide (NaOH)                             | 0.12                                |
| Methyl Ethyl Ketone                                     | D                                   |
| Xylene  | D                                   |
| 10% Acetic Acid (HOAc)                                  | 6.14                                |
| 10% Hydrochloric Acid (HCl)                             | 1.4                                 |
| 30% Hydrochloric Acid (HCl)                             | 0.088                               |
| 20% Ammonium Hydroxide (NH <sub>4</sub> OH)             | 0.84                                |
| 10% Ammonium Hydroxide (NH <sub>4</sub> OH)             | 0.81                                |
| 95% Ethyl Alcohol                                       | 0.37                                |
| Acetone   | 2.1                                 |
| Ethylene Dichloride                                     | 1.5                                 |
| Toluene   | 1.4                                 |
| JP-4 Fuel   | (0.01)                              |
| 10% Citric Acid   | 0.80                                |
| 40% Chromic Acid  | (5.82)                              |

Chemical & Solvent Resistance      ASTM D543 60T      3" x 1" x 0.125"

Testing performed by AZS Corporatio, 2525 South Combee Road, Lakeland, Florida 33801