SPECTRASHIELD
LINER SYSTEMS

# ***BARRIER COAT*** **SILICONE MODIFIED POLYUREA**

## PRODUCT DESCRIPTION:

*SpectraShield Barrier Coat*, is a two component 100% solid Silicone Modified Polyurea with superior performance in water/wastewater applications. *Barrier Coat* displays extremely fast cure times with excellent adhesion to a variety of substrates such as concrete, brick and steel. It can be spray applied at temperatures ranging from 20ºF to 150ºF. *Barrier Coat* has excellent chemical resistance, excellent water insensitivity, and a temperature range of -40ºF to 250ºF. Additionally, it conforms to USDA and FDA guidelines for incidental food contact.

## PRIMARY APPLICATIONS:

*Barrier Coat* adheres well to several substrates including concrete, steel, and wood. Some typical uses include:

- MANHOLES
- WET WELLS & PUMP STATIONS
- WWTP STRUCTURES
- SECONDARY CONTAINMENT
- WASTEWATER LAGOON & POOL LINING
- COLD STORAGE AREAS
- WASH BAYS & SHOWERS
- COOLING TOWERS
- PETROCHEMICAL REFINERIES
- OILFIELD PIPELINE COATING
- WATERPROOFING
- INDUSTRIAL COATING
- COATING POLYURETHANE FOAM

## COLOR:

- PINK

## TYPICAL PHYSICAL PROPERTIES:

| | | |
|---|---|---|
| Tensile Strength (PSI) | ASTM D412-06 | 2670 |
| Elongation (%) | ASTM D412-06 | 430 |
| Tear Strength (PLI) | ASTM D624-00 | 280 |
| Hardness (Shore D) | ASTM D2240-05 | 42 |
| Flexibility (1/8" Mandrel) | ASTM D522-93a | Pass |
| Flash Point (ºF) | Pensky-Martin | >200 |
| Taber Abrasion (mg loss) CS17 Wheel, 1 kg per 1000 cycles | ASTM D4060 | 25 |
| Viscosity – B Side | CPS | 300 |
| Viscosity – A Side | CPS | 500 |
| Ratio – A/B | PBV | 1:1 |

## TYPICAL PROCESSING PROPERTIES:

| | | |
|---|---|---|
| Gel Time | Seconds | 9 |
| Tack Free Time | Seconds | 15 |
| Open to Foot Traffic | Minutes | 5 |
| Open to Industrial Traffic | Minutes | 60 |

## RECOMMENDED EQUIPMENT SETTINGS:

| | | |
|---|---|---|
| A-Side Hose Temperature | ºF | 150 |
| B-Side Hose Temperature | ºF | 150 |
| Block Temperature | ºF | 150 |
| Spray Pressure (PSI) | Graco, GX-7 | 2000 |
| Spray Pressure (PSI) | GlasCraft, Probler | 1500 |

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## APPLICATION EQUIPMENT:

This material must be applied utilizing a high pressure plural component pump (1: 1 by Volume) such as a GlasCraft-MX® equipped with a Probler® Gun or a Graco® H-2035 proportioning unit and a Graco® GX-7 (400 Series) or GX-8 spray gun. This proportioning unit must be capable of supplying the correct pressure and heat for the required hose length on a consistent basis. This characteristic is mandatory to apply this elastomer in a consistent, efficient manner.

## INSTALLATION RECOMMENDATIONS:

Substrate surfaces should be free of loose particles, laitance, rust, grease and spills. Always agitate the B-side before using.

## CONCRETE:

**Old Concrete** - Sandblasting, shot blasting or water blasting is highly recommended to remove surface contaminates. Any oils or grease must be removed prior to product application.

**New Concrete** - The concrete should be allowed to cure for a minimum of 30 days. Shot -blasting, sand blasting, water blasting or acid etching is required to remove the surface laitance that appeared during the curing process.

**Carbon Steel**- The steel must be prepared to a "near white metal," equivalent to SSPC 10 or NACE 2. For immersion service, a 3-mil blast profile is recommended. A 2-mil blast profile is generally accepted. A 10 - 40 mil coat of *Barrier Coat* is generally recommended based on chemical resistance issues.

## SAFETY AND HANDLING:

Refer to MSDS sheets

## SHELF LIFE AND STORAGE:

Six months in factory delivered unopened drums. Keep away from extreme heat, cold, and moisture. Maintain at a proper storage temperature of 60°F - 100°F.

## CHEMICAL RESISTANCE:

| Chemical | Result (25ºC) |
|---|---|
| Acetic Acid (100%) | RC |
| Acetone | RC |
| Ammonium Hydroxide (50%) | R |
| Benzene | RC |
| Brine-Saturated H2O (310gll) | R |
| Chlorinated H2O | R |
| Clorox® (10%) H2O | R |
| Diesel Fuel | RC |
| Gasoline | RC |
| Gasoline / 5 % MTBE | RC |
| Gasoline / 5% Methanol | RC |
| Hydrochloric Acid (20%) | R |
| Hydrofluoric Acid (50%) | R |
| Hydraulic Fluid (oil) | RC |
| Isopropyl Alcohol | R |
| Lactic Acid | RC |
| MEK | RC |
| Methanol | RC |
| Methylene Chloride | C |
| Mineral Spirits | RC |
| Motor Oil | R |
| MTBE | C |
| Muriatic Acid (10%) | R |
| NaCl / H2O (10%) | R |
| Nitric Acid (50%) | R |
| Phosphoric Acid (10%) | R |
| Phosphoric Acid (50%) | R |
| Potassium Hydroxide (10%) | R |
| Potassium Hydroxide (20%) | R, Dis |
| Propylene Carbonate | RC |
| Sodium Hydroxide (25%) | R |
| Sodium Hydroxide (50%) | R |
| Sodium Hypochlorite (10%) | R |
| Sodium Bicarbonate | R |
| Stearic Acid | R |
| Sugar *I* H2O | R |
| Sulfuric Acid (10%) | R |
| Sulfuric Acid (>50%) | RC |
| Toluene | R |
| l,l,l-Trichlorethane | C |
| Trisodium Phosphate | R |
| Vinegar *I* H2O (5%) | R |
| H2O | R |
| H2O (14 days @ 82ºC) | R |
| Xylene | RC |

**R → Recommended** → Little or no visible damage
**RC → Recommended Conditional** → Some effect, swelling, discoloration
**C → Conditional** → Crackling – wash down within 1 hour of spillage to avoid defects
**NR → Not Recommended**
**Dis → Discoloration**

## ADHESION RESULTS:

### ASTM D-4541 Elcometer

| | |
|---|---|
| Concrete | >900 psi → Substrate Failure |
| Steel | >1050 psi → Material Failure |
| Wood | >250 psi → Delamination |