



# POLIBRID® 706

## TECHNICAL DATA SOLVENTLESS ELASTOMERIC POLYURETHANE PROTECTIVE COATINGS AND LININGS

### GENERAL PROPERTIES

**POLIBRID 706** is a tough, flexible and resilient elastomeric polyurethane designed primarily for spray application over geotextile fabrics for the production of geomembrane liners.

**POLIBRID 706** produces a dense monolithic membrane that is permanently bonded to the geotextile fabric, resulting in a strong, highly impermeable geomembrane liner. It withstands concentrated loads and surface deflections without tearing or breaking. Does not require an earth cover as it is physically unaffected by exposure to UV. Easy to repair by hand at any time if needed and repair kits are available.

**POLIBRID 706** may be applied onto almost any surface, offering a wider range of options in terminations and transitions from the geomembrane onto walls, tank bases, pads, pedestals and pipe racks. Fabric panels are overlapped at least 12", producing double-decked seams that greatly exceed the strength of the geomembrane itself. Reduces the need for mechanical anchoring and eliminates heat welding required for seams in thermoplastic sheet liners.

**POLIBRID 706** is a premium-quality, thermosetting elastomer that meets all known VOC regulations and is virtually odorless during and after application. It is airless-spray applied with specially designed plural component pumps at virtually any thickness in one application. Its solventless formulation eliminates pinholes caused by solvent evaporation, producing a dense monolithic membrane that may be placed in immersion service moments after application.

### RECOMMENDED USES

**POLIBRID 706** is recommended for application over non-woven polypropylene geotextile fabrics to produce flexible geomembrane systems, typically installed over compacted soil. Also suitable for direct application to urethane foam, concrete or steel to protect against impact or abrasion.

- **Secondary Containment Liners**
- **Storm Water Runoff Containment Liners**
- **Evaporation Lagoon Liners**
- **Bio-Remediation Lagoon Liners**

### LIMITATIONS

Not recommended for exposure to concentrated acids, aromatic hydrocarbons, ketones or chlorinated solvents. May not be suitable for applications requiring low surface friction characteristics.

<b>GENERIC TYPE</b>	Solventless, Elastomeric Polyurethane Aromatic, Chemical Cure (ASTM D16 Type V)
<b>COLOR *</b>	Gray
<b>SOLIDS CONTENT</b>	100 %
<b>VOC CONTENT</b>	Zero
<b>MAXIMUM BUILD</b>	Unlimited
<b>FILM SHRINKAGE</b>	Zero (Wet to Dry)
<b>TENSILE STRENGTH</b>	1,441 psi (ASTM D-412)
<b>ELONGATION</b>	115% (ASTM D-412)
<b>HARDNESS</b>	Shore "A" 76 @ 77°F (25°C) (ASTM D-2240)
<b>FLEXIBILITY</b>	Passes multiple bends on 1/8" diameter mandrel @ 125 mils (ASTM D-1737)
<b>ABRASION RESISTANCE</b>	4.5 mgs. weight loss Taber Abraser w/ CS-17 wheels 1,000 revs; 1 kg. load (ASTM D-4060)
<b>TEAR RESISTANCE</b>	141 lbf/in (ASTM D-624)
<b>COMPRESSIVE STRENGTH</b>	> 1,000 psi (ASTM D-695) Full recovery when load is removed
<b>IMPACT RESISTANCE</b>	> 110 in lbs / Direct and Reverse (ASTM D-2794)
<b>MOISTURE ABSORPTION</b>	Average 0.27% (24 hours) (ASTM D-570)
<b>WATER VAPOR TRANSMISSION RATES (WVTR)</b>	75-80 mils - 0.069 gm/100 in <sup>2</sup> / 24 hrs. at 100% RH, 73°F (23°C) (ASTM F-1249-90)
<b>SERVICE TEMPERATURE</b>	<u>Dry</u> : -50°F to 140°F (-46°C to 60°C) <u>Immersion</u> : Ambient

\* Due to its aromatic composition, original light gray color of the coating will tend to darken and/or change to an "olive green" shade upon continued exposure to UV. Except for its color change, coating is unaffected by UV exposure.

## EQUIPMENT REQUIREMENTS &amp; APPLICATION CHARACTERISTICS

**Spray Equipment** ..... Special designed, plural-component high-pressure airless spray machine. GRACO® "Hydra-Cat", 45:1 fluid-to-air ratio, King air motor with triplex bottom on a 2A:1B, fixed volume ratio. Standard equipment typically includes heated hoses, drum heaters, suction feed from 50 gallon steel drums (feed pumps not required in most cases), recirculation system, GRACO® R-A-C III or IV spray tips from 0.021" to 0.035", stroke counter and automatic high-pressure shut-off system. Other set-ups may be necessary and many options are available. Applicator training is required and spray equipment must be approved by Polibrid Technical Service.

**Mix Ratio by Volume** ..... 2A:1B (Two to One)

**Pot Life** ..... 7 to 10 Minutes

**Dry to Touch @ 72°F** ..... 20 mils - 50 min. / 125 mils - 15 min.

**Recommended Thickness over Geotextile Fabric** ..... 60 mils DFT

**Minimum Cure Temperature** ..... 25°F (-4°C)

**Ambient Temperature** ..... 40° F to 120°F (4°C to 49°C)

**Materials Temperature** ..... 80°F to 90°F (27°C to 32°C)

**Substrate Temperature** ..... Min. 40°F (5°C) / Max. 140°F (60°C)  
Minimum 5°F (3°C) above Dew Point

**Ambient Moisture** ..... Maximum 95% RH

**Theoretic Coverage** ..... 1,604 ft<sup>2</sup>/gal @ 1 mil DFT  
1 m<sup>2</sup>/lt @ 1mm (40m<sup>2</sup>/lt @25μ)  
(Coverage may vary widely depending on job conditions)

**Flash Point** ..... Resin (Part A): 500°F (260°C) (COC)  
Catalyst (Part B): 367°F (199°C) (COC)

**Specific Weight** ..... Resin (Part A): 8.5 lbs/gal (1.02 kg/lt)  
Catalyst (Part B): 10 lbs/gal (1.2 kg/lt)  
Mixed: 9 lbs/gal (1.08 kg/lt)

**Flush Solvents** ..... Mineral Spirits

**Cleaning Solvents** ..... MEK, Lacquer Thinners

**Packaging** ..... 50 gallon steel drums

**Sales Unit** ..... 150 gallon kit

**Shelf Life** ..... Resin (Part A) 2 Years / Catalyst (Part B) 6 Months  
(Stored dry in original, unopened containers)

**Mixing** ..... Thoroughly mix Resin (Part A) with air-driven agitator for 30 minutes just prior to use. Black tint must be added to Catalyst (Part B), then thoroughly mixed with air-driven agitator for 30 minutes just prior to use.

**Storage** ..... KEEP DRY! Do not place drums directly over concrete or earth; store on top of wood slats or pallets. Blanket partial drums with nitrogen gas to prevent moisture contamination. Avoid freezing. Do not open until ready for use. Rotate Resin (Part A) drums regularly if stored for long term. Catalyst (Part B) must be stored where temperatures will not drop below 70°F (21°C) or exceed 95°F (35°C).

## GEOMEMBRANE INSTALLATION

**SOIL BASE:** Prepare per Engineer's instructions to provide suitable foundation for geomembrane. Base must be dry with no weak or unstable areas, or abrupt grade changes. Base must be free of sticks, roots, debris and/or organic or decomposing matter. When applicable, excavate 24" wide x 36" deep trench (backfilled, compacted after geomembrane installation) to anchor geomembrane perimeter. Provide adequate drainage.

**FABRIC:** Use heat-set, non-woven needlepunched polypropylene geotextile fabric (8 to 10 oz/yd). Unroll and place flat upon soil base, allowing 12" overlap between adjacent panels. Cut panels as needed to accommodate penetrations, transitions, trenches, etc. Keep clean and dry, avoiding foot traffic on coated fabric.

**COATING APPLICATION:** Spray coating directly onto fabric, producing a monolithic membrane. At fabric overlaps, lift top lap and apply coating to bottom lap, then lay top lap back down and press it into the fresh coating using non-stick roller. Spray coating over top lap to produce an even, pinhole-free transition along entire overlap. To reduce field installation time, fabric panels may be pre-coated in-shop, moving them to job site as needed so that only seams and transitions are coated on-site.

**NOTE:** Transitions of the geomembrane to foundations, walls, piping, anchoring devices, etc. may require the use of specific primers, surface preparation methods and other procedures for the treatment of steel, concrete and other substrates.

## PRECAUTIONS

**HEALTH & SAFETY:** AVOID SKIN CONTACT! Wear chemical goggles as minimum eye protection, use impermeable gloves and cover all exposed skin. Do not allow contaminated clothing to contact skin. Use properly fitted organic vapor respirators and adequate ventilation. Wash hands before eating, smoking or using washroom. Follow precautions in CFR Title 29 (OSHA) and all pertinent Local, State & Federal health, safety and environmental regulations. Read, understand and fully comply with recommendations made in Material Safety Data Sheets (MSDS) supplied for individual coating components!

**CONFINED SPACES:** Provide forced air ventilation. Workers must use carbon monoxide filtered breathing air-line respirators. If flammable vapors are present, use only non-sparking tools and equipment. COMPLY WITH PERTINENT LOCAL AND OSHA REGULATIONS RELATIVE TO WORK IN CONFINED SPACES.

**FIRST AID:** SKIN CONTACT: Wash thoroughly with plenty of soap and water. EYE CONTACT: Immediately flush with fresh clean water for at least 15 minutes and get specialized medical attention promptly. INHALATION: Remove to fresh air and provide oxygen. INGESTION: Immediately call a physician or poison control center. DO NOT INDUCE VOMITING!

**THESE MATERIALS ARE FOR INDUSTRIAL USE BY FACTORY-TRAINED QUALIFIED TECHNICIANS ONLY!**

CONSULT YOUR POLIBRID TECHNICAL SERVICE REPRESENTATIVE BEFORE SPECIFYING !

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