



Technical Data

PolySpar FL

Clear Aliphatic Floor Coating

NB 1251

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MANUFACTURER

Chemline, Inc.

5151 Natural Bridge Road

St. Louis, MO 63115

Phone: (918) 485-2835

PRODUCT DESCRIPTION:

PolySpar FL is a 100% solids, aliphatic polyaspartic floor coating based on new polyurea technology. **PolySpar FL** displays virtually no odors (mild mint smell) and is very moisture insensitive. This product has been specifically formulated to be used as a topcoat for existing epoxy floors or as a stand alone floor coating. **PolySpar FL** is extremely color stable and displays excellent UV weathering characteristics. The product can be applied in temperatures ranging from 0°F to 200°F. When fully cured, **PolySpar FL** will produce a highly abrasion resistant, high-gloss, smooth finish. As a topcoat, **PolySpar FL** will provide added UV protection and durability to epoxy floors and other flooring systems. **PolySpar FL** may be diluted with Aromatic 100, Xylene, or Oxsol 100 for thinning purposes.

PRODUCT USES:

PolySpar FL adheres well to several substrates including concrete, steel, wood, and plastic. The high tensile strength of the coating allows this product to better withstand the abuse of industrial equipment, steel-wheeled carts, and forklifts with minimal cracking and peeling. The excellent chemical resistance is well suited for various harsh applications. Some typical floor applications include:

- COLD STORAGE AREAS
- INDUSTRIAL WAREHOUSE FLOORS
- FOOD PROCESSING AREAS
- AUTOMOBILE DEALERSHIP FLOORS
- PULP AND PAPER MILLS
- CHEMICAL PLANTS
- AIRPLANE HANGAR FLOORS
- FERTILIZER PLANTS
- CUSTOM WOOD FLOORING

APPLICATION TECHNIQUES:

PolySpar FL should be thoroughly mixed then applied to the floor area. The material should be evenly spread out using squeegees and back rolled using tight napped rollers. There is no thickness limitation for **PolySpar FL**. However, the product should be applied in 5-10 mil coats for maximum leveling and air release.

AVAILABLE COLORS:

- Clear
- Custom tinting on request

ADVANTAGES:

- FAST CURE
- 100% SOLIDS
- LITTLE MOISTURE SENSITIVITY
- HIGH TENSILE STRENGTH
- COLOR STABLE
- ADHERES WELL TO SEVERAL SUBSTRATES
- VIRTUALLY NO ODOR
- DISPLAYS EXCELLENT UV RESISTANCE
- AVAILABLE IN SEVERAL COLORS
- CURES FROM 0°F to 200°F
- HIGH GLOSS FINISH
- USDA ACCEPTABLE-MEETS FSIS DIRECTIVE
- ADDS LIFE TO EPOXY FLOORS

PHYSICAL PROPERTIES:

Tensile Strength	ASTM D-412	Failure, psi	3850
Elongation	ASTM D-412	%	15
Tear Strength Die C	ASTM D-624	pli	625
Flexural Modulus	ASTM D	psi	187,430
Hardness	ASTM-D2240	Shore D	82
Flash Point	Pensky/Martin	°F	>200
Taber® Abrasion (1KG, 1000 revs)	ASTM-D4060	mg loss, CS-17	66.8
IZOD® IMP RESIST.	ASTM D256-56	ft/lbs./In	1.78
% Solids (weight)	Calculated	%	100
VOC Content	Calculated	lbs./gal	0.00
Gloss	ASTM D-523	60° spec. Gloss	90+
Impact	ASTM D-2794	direct, reverse	60,10

Processing Properties (10 mils) (75°F) (54%RH)

Gel time (200 gram mass)	30 Minutes
Volume Ratio (A:B)	2:3
Weight Ratio (A:B)	75:100
Open to Foot Traffic	6 Hours
Open to Industrial Traffic	16-24 Hours

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INSTALLATION RECOMENDATIONS:

PolySpar FL adheres well to several sound substrates including concrete, steel, and wood. All surfaces should be free of loose particles, rust, voids and spalls. It is recommended that this product be applied by the squeegee and back roll method to ensure proper coating thickness. Chloride levels should be checked prior to application. Always stir the resin side prior to application. The product requires 1½ minutes mixing with a jiffy mixer prior to application. Any material that is not going to be used immediately should be left in the bucket as the pot life in the container is longer than on the floor in thin coats. This is just the opposite of most epoxies. For maximum leveling, it is ideal to squeegee and back roll immediately after mixing. **NOTE:** Continued back rolling of this product once it begins to tack may result in an orange peel surface, and may reduce proper bonding.

Concrete:

Old Concrete- Sandblasting, shot blasting or water blasting is recommended to remove surface contaminants. Any oils or fats must be removed prior to application. Acid etching may be required (followed by thorough rinsing) to open the pores of the concrete to accept a primer coat. Do not apply **PolySpar FL** to wet substrates. Contact the manufacturer for primer recommendations in wet applications. It is recommended a primer be used prior to application of PolySpar FL in order to prevent pin holing and in some cases, help fill voids and create a smoother surface. A 5-10 mil coat per application of **PolySpar FL** is generally recommended depending on chemical resistance and abrasion issues.

New Concrete- The concrete should be allowed to cure for a minimum of 30 to 60 days. Acid-etching (15% muriatic/ 85% H₂O) is required to remove the surface laitance that appeared during the curing process. A primer must be applied (contact the manufacturer for specific recommendations). A 10-mil coat of **PolySpar FL** is generally recommended depending on chemical resistance and abrasion issues. The pH should be neutralized prior to installation.

Steel- The steel must be prepared to a "near white metal" equivalent to SSPC 10 or NACE 2. For immersion service, a three-mil blast profile is recommended. A two-mil blast profile is generally acceptable. A 3-10 mil coat of polyurea is generally recommended.

Substrate Repairs- All spalls and cracks should be repaired to ICRI standards. Expansion joints should be honored. Horizontal control joints can be filled with ElastoFast 90 (see prior to the application of **PolySpar FL**).

MIXING INSTRUCTIONS:

Always stir the resin side prior to mixing. Pour entire contents of "A-Side" into "B-Side" and mix with "Jiffy Mixer" for 1½ minutes or until consistent color is attained.

APPLICATION NOTES:

► It may be required to wipe steel or metal surfaces with acetone or M.E.K. prior to application of **PolySpar FL**. This will remove moisture that may have accumulated on the surface after sandblasting.

Primers:

► A 80% to 100% solids (non-glossy) epoxy, solvent-based isocyanate or water dispersible isocyanate (for concrete only) are all acceptable primers for **PolySpar FL**. PoxyPrime EPS-LT manufactured by ESI is a good example. Some epoxy primers require the use of MEK as a wipe-down solvent (due to the build-up of active hydrogen on the surface) prior to the application of **PolySpar FL**. Contact manufacturer for recommendations

TOP-COATING:

PolySpar FL should be top-coated after it has become tack free. Several paints, epoxies, urethanes, or polyureas can be used as a topcoat to insure proper chemical resistance.

REPAIRS & MAINTENANCE:

PolySpar FL can be used to repair small cuts and tears in polyurea coatings using a small, soft bristle brush, after the surface has been roughed up or properly abraded.

CLEAN-UP/DISPOSAL:

Cured product may be disposed of without restriction. The un-cured isocyanate and resin portions should be mixed together and disposed of in a normal manner. "Drip free" containers should be disposed of according to local, state, and federal laws.

SAFETY & HANDLING:

MSDS will be mailed immediately upon receipt of a purchase order or upon request. All personnel should read and understand the safety recommendations. All body parts should be covered and respirators are required for safe application of this product. Keep uncured product away from children at all times.

LIMITATIONS:

The chemical resistance chart should be consulted prior to any application. This coating displays good abrasion resistance and physical properties, however it can still be cut. Proper precautions should be taken to eliminate sharp objects from "slicing" the coating.

SHELF LIFE:

Six months to one year in factory delivered, unopened containers. Keep away from extreme heat, freezing and moisture.

PACKAGING:

PolySpar FL is available in 2 1/2 gallon kits. The "A" Side is in the smaller container (1 gal). The "B" side is in the larger container (1 1/2 gal). When mixed together, the resulting blend is 2 1/2 gallons.

SHIPPING INFORMATION:

PolySpar FL can be shipped via most commercial truck lines. The shipping class is "55". The "A" side (isocyanate) and the "B" side are unregulated.

ADHESION RESULTS:

ASTM D-4541 PATTI Tester (F2 Head)

Concrete Patio Block (no primer)	350 psi
-concrete failure- 1/32nd " concrete on dolly	
Concrete Patio Block (IsoPrime primer)	450 psi
-concrete failure- 1/8" concrete on dolly	
Concrete Patio Block (100% solids epoxy)	450 psi
-concrete failure 1/16th " concrete on dolly	
Steel (No Primer)	>1000 psi
-adhesive failure	
Wood (No Primer)	250 psi
-delamination	

CHEMICAL RESISTANCE:

ASTM D3912 Mod. 24 Hour Immersion

<u>Chemical</u>	<u>Result (25°C)</u>
Acetic Acid (100%)	NR
Acetone	R, Dis
Ammonium Hydroxide (20%)	R
Anti-freeze/Water (50:50)	RC
Battery Acid (Sulfuric Acid)	RC
Benzene	C
Brake Fluid (DOT3)	R, Dis
Brine-Saturated (310g/l)	R
Citric Acid	RC
Clorox® (10%)/Water	RC, Dis
Copper Chromate Arsenic (4%)	R
Diesel Fuel	R
Gasoline	R
Gasoline/5% MTBE	RC
Gasoline/5% Methanol	R
Hydrochloric Acid (100%)	C
Hydraulic Fluid (oil)	R, Dis
Isopropyl Alcohol	RC
Lactic Acid	RC
MEK	NR
Methanol	R, Dis
Methylene Chloride	NR
Mineral Spirits	R

CHEMICAL RESISTANCE CONTINUED:

Motor Oil	R, Dis
MTBE	C
Muriatic Acid (10%)	R
NaCl/Water (10%)	R
Nitric Acid (50%)	R
Phosphoric Acid (10%)	R
Phosphoric Acid (50%)	NR
Potassium Hydroxide (10%)	R
Potassium Hydroxide (20%)	R, Dis
Propylene Carbonate	R
Skydrol®	RC
Sodium Hydroxide (50%)	R
Sodium Hypochlorite (10%)	RC
Sodium Bicarbonate	R
Sugar/Water (10%)	R
Sulfuric Acid (50%)	R, Dis
Toluene	R
1,1,1-Trichlorethylene	R, Dis
Vinegar (5%)/Water	R
Water	R
Water(82°C)14Day	R
Xylene	R

R= Recommend =

Little or no Visible Damage

RC or C= Recommend Conditional =

Some Effect-Swelling, Discoloration, Cracking,-Wash Down Within One Hour of Spillage to Avoid Effects

NR= Not Recommended

Dis= Discoloration Only

Coverage Rates:

<u>Coating Thickness</u>	<u>Sq. Ft./Gal</u>
3 mils	508
5 mils	305
10 mils	155
15 mils	102
20 mils	77
50 mils (multiple coats)	31
100 mils (multiple coats)	16
250 mils (multiple coats)	6.5

All calculations are **(approximate)** coverage rates.

WARRANTY:

The technical data and any other printed information furnished by GatorHyde are true and accurate to the best of our knowledge. **PolySpar FL** conforms to in-house quality control procedures and should be considered free of defects. Due to the wide range of applications of this product, it is impossible to assume responsibility for any errors in regard to application, coverage, workmanship, over-spray, or injuries resulting from the use of this product. Liability, if any, for this product will be in the form of replacement materials. The possibility exists to warrant this product on a specific application basis under specific written application instructions from GatorHyde

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