Alpha Liner

Technical Data

Revision date: 10/14

DESCRIPTION

Alpha Liner is a high performance urethane elastomeric texture coating specifically designed for high build applications. When fully cured, Alpha Liner forms an extremely tough, abrasive resistant rubber coating, especially well-suited for applications requiring protection from impact, abrasion or corrosion on metal, wood or concrete surfaces. Alpha Liner texture surfaces provide an excellent non-slip surface in both wet and dry environment.

FEATURES

Easy application using a simple Undercoating Gun. Alpha Liner does not require a humidity-controlled environment for application. Ultraviolet stabilizers can be applied in almost any color. Convenient pre-measured quart kits.

Alpha Liner has excellent abrasion resistance and will out wear many other materials when subjected to impingement or slurry abrasion. Abrasion resistance ASTM D 3389-94 (Taber Model 502/C-17 wheel with 1000 gram load), 4.4 mg abrasion loss per 1000 revolutions.

Alpha Liner has been successful at temperatures up to 180°F. Under wet or humid conditions at elevated temperatures; Alpha Liner is superior to most other urethanes. Although Alpha Liner becomes stiffer at lower temperatures it still remains flexible at temperatures as low as –70°F. Alpha Liner has excellent chemical resistance in the pH range of 2 to 12. Resistance to most oils at room temperature is good, but resistance to solvents is generally poor. The table below gives an indication of resistance to some chemicals; however, users should conduct their own tests.

Chemical	Resistance	Chemical	Resistance
Chlorinated Water	E	Sea Water	E
Nitric Acid, 5%	P	Toluene	P
Hydrochloric Acid , 5%	P	Methyl Ethyl Ketone	P
Phosphoric Acid, 10%	G	Ammonia	F
Sodium Hydroxide, 10%	P	Kerosene	P

G – Good E – Excellent F – Fair P - Poor

MIXING AND APPLICATION

The resin portion of Alpha Liner will crystallize when exposed to temperatures below 40°F. The curative portion may crystallize when exposed to temperatures below 20°F. This does not harm the components; however, the resin component should be warmed to between 90°F and 100°F, and the curative component to room temperature and each component mixed well before using. The components should not be overheated and should be cooled to room temperature before mixing together. After long-term storage it is a good policy to stir each component before adding them together.

Alpha Liner should only be applied to surfaces that have been properly prepared. Most common materials, such as steel, aluminum, fiberglass, rubber, urethane, brick, concrete and wood can be coated with Alpha Liner (when coating surfaces other than steel truck beds please contact DIYBedliner.com for special preparation and priming procedures update). To obtain maximum adhesion most substrates must be abraded, grit-blasted or etched before applying primer and Alpha Liner. New metal surfaces should be grit-blasted to SSPC-SP-10 "Near White Metal Blast" and should exhibit a 2 to 4 mil surface profile.

Metallic substrates must always be dry and primed with Primer 450 before applying Alpha Liner.

The time required for Alpha Liner to cure is dependent upon temperature. A 75% cure is generally sufficient for mild abrasion and submersion. The cure times shown below are for a 100-mil thick coating; cure times should be increased by 50% for a 250-mil thick coating.

Vapors from Alpha Liner contain isocyanates and solvents. Supplied fresh air ventilation must be used for all indoor applications. When working in tanks and other closed vessels or downstream from spray gun, fresh air breathing equipment should be worn at all times. Both resin and curative components contain flammable solvents and should be protected from sparks and open flames. Avoid contact of components with skin and clothing as both resin and curative can cause skin and eye irritation. In case of eye contact, immediately flush with plenty of water for at least 15 minutes. If swallowed do not induce vomiting. Call a physician at once. Keep out of reach of children.

Equipment must be cleaned immediately after use to prevent buildup of cured urethane on internal parts of equipment. Solvents, such as Toluene or M.E.K. work well for cleaning soiled spray equipment. As soon as urethane spraying is completed, solvent should be pumped through the pump, hose and spray gun until solvent comes out clear. Dispose of all empty Alpha Liner component containers in accordance with all local, state and federal regulations. Empty component containers can be rendered non-hazardous by rinsing the containers with a small amount of mixed material and allowing the solvent to evaporate. The containers will then contain non-hazardous cured urethane.

PHYSICAL PROPERTIES	Mix Ratio By weight		100 parts A/ 32 part B
	Mix Ratio By volume		3 parts A/ 1 parts B
	Color	Mixed:	Clear with 19 available colors
	Working Life @ 72°F		45 minutes
	Specific Gravity: (Mixed)		0.969
	Weight/Gallon Mixed		8.08 lbs.
	% Solids by Volume		65%
WORKING PROPERTIES	Hardness @ 72° F	ASTM 2240	95-90 Shore A
	Tensile Strength	ASTM D-412 Die C	5638 psi
	Elongation	ASTM D-412 Die C	442%
	Tear Strength	ASTM D-624	990 (lbs./in.)
	Dielectric Strength	ASTM D-149-97a Method A	278 (V/mil)
	Taber Abrasion (Taber Model 502) with C-17 Wheel @ 1000 grams load	ASTM D-3389-94	Abrasion loss (mg/1000 rev.) 4.4 mg
	Brittleness Temperature	ASTM D-746	-97.60˚F (-72˚C)
	Federal Motor Vehicle Flammability Test	FMVSS-302	Pass

CURE TIMES		50˚F	75˚F	100˚F
	Cure Time 75%	6 days	3 days	1 day
	Cure Time 95%	15 days	7 days	3 days

CLEAN UP	Dispose of all empty Alpha Liner component containers in accordance with local, state and federal regulations. Empty component containers can be rendered non-hazardous by rinsing the containers with a small amount of mixed material and allowing the solvents to evaporate. The containers will then contain non-hazardous cured urethane.
STORAGE AND SHELF LIFE	Alpha Liner components are shipped from the factory in sealed containers that are purged with dry nitrogen. The containers should be kept tightly sealed and stored in a cool and dry area that is protected from direct sunlight and moisture. Storage temperatures should not exceed 80°F. Shelf life of factory sealed containers stored under these conditions is one year. Containers that have been opened should be resealed immediately after material has been removed in order to prevent moisture contamination and solvent evaporation. Resin component containers should be purged with dry nitrogen if the contents are not used within 24 hours after opening.
SHIPPING CLASS	Class 92.5 Hazardous