



Durothane

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2 Component Aliphatic Urethane

Product Description

Durothane is a chemical resistant two-component saturated polyester aliphatic urethane coating having exceptional resistance to most chemicals and excellent anti-soil properties. Displays excellent gloss retention on extended exterior exposures.

Recommended Uses

Use as a decorative and protective finish coat for metal, wood, and concrete in severe industrial, marine and process environments. Very good in environments exposed to acids, alkalis, salts and solvents. Recommended in heavy industrial and marine atmospheres where long maintenance free life is required. Use as a sealer (clear) to protect and provide depth of gloss for urethane coated transportation equipment. Especially useful on floors in such areas as aircraft hangers, service bays, and warehouse floors where light reflectance, chemical and abrasion resistance are required. Because of Durothane high crosslink density and non-toxic cured state it is an acceptable coating for food and beverage process plants and hospital facilities.

Physicals	Volume Solids	42.5%
	VOC	4.31 lbs./gal.
	Weight/gal.	8 lbs.
	Temp. Res.	250 °F
Color/Gloss	Color	Clear
	Sheen	Gloss & Satin

Application	Recommended Thickness (min.)	1.9 mils dry, 4.5 mils wet
	Theoretical Coverage	1.9 mils DFT 355 sq.ft.
	Method	Brush, roller, spray
	Induction Time	none

Drying Time (hrs)	50 ° F★	75 ° F★	90 ° F★
<input type="checkbox"/> to touch	4	2	1
<input type="checkbox"/> to handle	8	4	2
<input type="checkbox"/> to recoat (max.)	12★	8★	6★
<input type="checkbox"/> Pot Life	24	12	4

★ @ 50% relative humidity, higher humidity will require shorter recoat times.

Unit Size	1 Gallon Unit	5 Gallon Unit
Part A	1 Gallon (short filled)	5 Gallon (short filled)
Part B	1 Quart (short filled)	1 Gallon (short filled)

Storage Shelf Life One year minimum from mfg date.

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Consult Stardek representative for system best suited to environment.

Limitations:

Apply in good weather when air and surface temperatures are above 40°F. For optimum application properties, bring material to 70°-80°F temperature range prior to mixing and application.

Surface Preparation:

Coat only clean dry surfaces. Remove all grease, oil, dirt or other foreign matter by solvent or detergent washing.

Previously Painted Surfaces:

Remove all rust, rust scale, other corrosion products, loose or heavy chalk and loose or scaling paint by “Hand or Power Tool Cleaning” (SSPC-SP2 or 3 respectively). “Sand or Brush Blast” (SSPC-SP7) any glossy areas until dull. Spot prime bare areas as recommended. To check compatibility apply coating to representative area of at least 25 sq.ft. and allow to cure and age several weeks. Then inspect for adhesion failure, wrinkling, lifting, blistering or any other sign of incompatibility present. Coating with Durathane can then proceed.

Concrete:

- (1) “Brush-Blast Cleaning (SSPC-SP7) can be used to prepare the concrete by removing all foreign matter and provide tooth for bonding. Remove all dust from surface before starting the application of the coating.
- (2) “Acid-Etching” All surfaces shall be acid etched with Muriatic Acid solution (1 part acid to 2 parts water). Apply solution by brush or spray until surface is thoroughly wetted. When bubbling ceases (5-10 minutes), wash down surface with fresh water and scrub with a stiff brush. Pressure wash or rinse with plenty of fresh water. If surface is acidic (ph below 7), neutralize surface by washing with 1-2% ammonia solution.

STARDEK II – STARKEK III:

When using over STARDEK II or III wait 12 hours after applying Texture coat or rinsing off release agent before applying this product.

Mixing:

Material is supplied in 2 containers as a unit. Always mix a complete unit in the proportions supplied. Combine entire contents of Part B with Part A and mix thoroughly with a power agitator.

Thinning:

Material is supplied at application viscosity and normally needs no thinning.

Application:

Apply by brush, roller, or spray. Apply at 3.5 mils wet.

Equipment:

Brush: Good quality 4" wide brush with short hair bristle.

Roller: 1/8" mohair or foam roller.

Conventional Spray: DeVilbiss MBC-510 gun; E tip and 704 air cap; 3/8" ID material hose; double regulated pressure tank with oil and moisture separator.

Work Stoppages:

Do not allow material to remain in hoses. Release pressure from pressure tank and disconnect material hose. Thoroughly flush hose and spray gun with lacquer thinner.

Cleanup:

Clean all equipment immediately after use with lacquer thinner. Spray equipment requires flushing with this solvent. It is good working practice to periodically flush out spray equipment during the course of the working day. Frequency should depend upon amount sprayed, temperature, elapsed time including delay, etc.

Welding:

In the event welding or flame cutting is performed on metal coated with this product, do so in accordance with instruction in ANSI/ASCZ 49.1, “Safety in Welding and Cutting.” All welded, burned, or otherwise damaged areas should be reprepared to base metal and recoated as specified.

Safety:

This product (and any recommended thinner) contains solvents and/or other chemical ingredients. Adequate health and safety precautions should be observed during all storage, handling, use and drying periods. For safe usage, user is specifically directed to consult the current “Material Safety Data Sheet” for this product. When using this product in a confined space or closed area, consult the current OSHA, or ANSI bulletins on safety requirements.

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Physical Performance Properties of Durothane – Dry Film

Tests conducted on 1.6 mil films, air dried for seven days at room temperature

Hardness – ASTM D3363	
Pencil	3H
Taber Abrasion - ASTM D4060 (mg loss per 1000 Cycles, CS-17 wheel, 1000g load)	5.2
Impact resistance, in lbs – ASTM D4141	
Direct	5.0
Reverse	10
QUV weatherometer	
Oxidation	no effect
Loss of gloss	no effect
Blistering	no effect
Yellowing	no effect
Crosshatch adhesion	
Untreated cold rolled steel	5B
Polycarbonate	5B
ABS	OB
PVC	OB
Film Properties	
Tensile strength, psi –ASTM D2370	5600
Elongation % - ASTM D2370	150

Chemical and Solvent Resistance -ASTM TEST Method C 868

Skydrol B-4	no effect
Hydraulic Fluid	no effect
25% Nitric Acid	Blistered
37% Hydrochloric Acid	Blistered
50% Sulfuric	Down Gloss
50% Sodium Hydroxide	no effect
10% Acetic Acid	no effect
30% NH3OH	no effect
Gasoline	no effect
MEK	Slight Swelling
Xylene	no effect

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