



TECHNICAL DATA

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FLEXSHIELD 1000 ALIPHATIC URETHANE

Product Description

A high solids, two component, polyester, aliphatic urethane for use in industrial / chemical atmospheric environments. It's excellent flexibility and impact resistance allows it to be used on equipment and surfaces that are subject to vibration, flexing and impact.

Features

- Excellent UV resistance
- Excellent chemical resistance
- Excellent abrasion resistance
- High flexibility and impact resistance.
- Excellent corrosion resistance

Recommended Uses

As a finish coat for properly prepared steel, and concrete substrates in heavy industrial and chemical environments..

Primer

Steel and Concrete: Flexshield Primer 4484

Chemical Resistance

Nitric Acid 25%	NE	Sodium Hydroxide 50%	NE
Hydrochloric Acid 10%	RG	Ammonium 30%	NE
Sulfuric Acid 50%	RG	MEK	SL
Acetic Acid 10%	NE	Xylene	NE

NE = No effect RG = Reduced Gloss SL = Slight swelling
4 hour spot test, covered @ 75°F.

Typical Properties

Solids by Volume	66% ± 2
Volatile Organic Compounds	2.5 lb/gal (310 g/l)
Theoretical Coverage	1059 ft ² @ 1 mil
Recommend DFT	3 – 4 mils
Number of Coats	1
Mix Ratio (by volume)	2.77”A” : 1”B”
Shelf Life @ 60-90°F (16-32°C)	Part A 12 months Part B 12 months
Color	Gray / White

SPECIFICATION DATA

Adhesion (direct to metal)	700 psi
Elongation – ASTM D638	25%
Pencil Hardness	5H
Impact Resistance	110 in-lbs 120 in-lbs
Direct	110 in-lbs
Reverse	120 in-lbs
Abrasion Resistance CS 17 wheel / 1000 gm / 1000 cycles	50 mg loss
Operating Temperature	-35°F to 180°F up to 140°F
Dry	-35°F to 180°F
Wet	up to 140°F

Ordering Information

Packaging:	3.5 gal Kits
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APPLICATION INFORMATION FLEXSHIELD 1000

Surface Preparation

Remove all oil, grease or other contaminants from the surface to be coated in accordance with SSPC-SP 1.

Apply over clean dry properly applied recommended primer

Other: Contact ITW Futura Coatings for specific recommendations.

Mixing

Do not mix polymer and curative components together until ready to use.

Mix curative prior to adding to the polymer. The polymer must be clear and fluid when used.

Add 1 part curative to 2.77 parts polymer and power mix thoroughly for about 3 minutes or until a uniform consistency is achieved, being careful to mix material from bottom and sides of the container. Scrape the sides and bottom of the mixing container with a straight edged tool to blend in any unmixed material. Remix for another 2 minutes. Pour into a clean container and remix for 2 minutes.

Thinning

DO NOT THIN

Pot Life

Material Temperature	Time
75°F (24°C)	3 hrs

Application Conditions

	Normal	Minimum	Maximum
Material	75-90°F (24-32°C)	65°F (18°C)	100°F (38°C)
Surface	75-90°F (24-32°C)	40°F (4°C)	100°F (38°C)
Ambient	75-90°F (24-32°C)	40°F (4°C)	100°F (38°C)
Humidity	30-50%	0%	85%

Surface temperature must be 5°F (3°C) above the dew point.

Clean Up

Use MEK or a 1:1 blend of MEK and Toluene.

Application Equipment

Airless:

Pump Ratio	30:1 min	Tip Size	.009 - .013"
Material Hose	3/8" ID min 100' max	Tip Pressure psi	2000 - 2800

Roller / Brush: Acceptable. Allow 6 hours between coats.

Cure Time

These times are based on a 30-50% RH. Excessive film thickness, cooler temperatures or inadequate ventilation will require longer cure times and could result in premature failure.

Surface Temperature

75°F

Set to Touch	6 - 8 hours
Surface dry	8 - 16 hours
Hard Film	24 hours
Recoat (min)	6 hours
Recoat (max)	24 hours

- If the material has exceeded its maximum recoat time or full cure time contact ITW Futura Coatings for recommended recoating procedures.

Safety Information

- Read the Material Safety Data Sheet (MSDS) and container labels for detailed health and safety information.
- Do not apply material in enclosed areas without adequate air exchange and ventilation.
- All application personnel must use respirators rated for organic vapors, or in confined spaces wear fresh air respirators or fresh air hoods.
- Wear protective clothing, gloves and eye protection.
- Breathing fumes or contact with the skin may cause severe allergic reactions.
- This product contains flammable solvents! Keep away from all sparks, flames and hot surfaces.
- **This product is intended for industrial use by properly trained professional applicators only.**

Storage Conditions

- Coatings need to be protected from moisture contamination. Store drums and pails in a dry location at 55-80°F (11-27°C).
- Materials must be kept above 50°F (10°C).

ITW FUTURA COATINGS, 1685 GALT INDUSTRIAL BLVD., ST LOUIS, MO, (314) 733-1110

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