

KINGFIELD CONSTRUCTION PRODUCTS

High performance, chemically resistant sealant and waterproofing material for use as lining system, coating or joint filler.

XT1™

High solids, cold applied, two component polyurethane elastomer

PRODUCT DATA – v2.01.716

Description

XT1 is a liquid applied urethane coating that cures in hours to form a tough elastomeric liner that adheres to most substrates, forming a chemical and abrasion resistant barrier for waterproofing, corrosion protection, and containment of water and most aqueous chemicals.

Uses

XT1 is ideal for application in;

*Potable Water Facilities
Wastewater Facilities
Chemical Containment Waterproofing
Water Features
Cooling Tower Systems
Joint Repair*

Application procedure XT1

Equipment

Spray equipment requires large diameter hose and air supplied mastic gun. Airless pump may be used to provide fluid side pressure. See "Spray Application of XT1" (IG-12) or contact Kingfield for specific recommendations. Roller, squeegee, and trowel may also be used.

Preparation

General: Substrates must be clean and dry with no oils, grease or loose debris. XT1 Bonding Agent is recommended on all non-porous substrates. Perform adhesion tests to confirm adequacy of surface preparation. See Kingfield's specific substrate Instruction Guide for specific guidelines.

Concrete: ICRI-CSP 4-6 surface profile exposing aggregate. Concrete must exhibit minimum 3,000 psi compressive strength and be free of release agents and curing compounds.

The substrate must be clean and dry (see XT1 Instruction Guide), and free of contaminants.

Steel: Minimum 3 mil profile. Immersion service – SSPC-SP10/NACE No. 2 Near White Blast. Non-Immersion service – SSPC-SP6 / NACE No. 3 Commercial Blast. Use XT1 Bonding Agent for greater adhesion.

Advantages

Features

Forms a durable elastomeric liner.

Impervious to water and most liquid chemicals

Adheres to and bridges common construction materials such as concrete, steel and other metals, asphalt, pavement, glass, wood and most coatings.

Complies with the most stringent VOC regulations

Can be repaired if damaged

UV Stable

Liquid, two component urethane.

Benefits

Able to bridge cracks and joints and withstand continuous movement.

Provides a long lasting solution for tank and pond liners.

Versatility in range of applications.

Environmentally friendly. CA friendly.

Ideal for sever wear applications.

Resistant to damage from prolonged UV rays.

Can be applied to complex shapes, multiple penetrations, or to most geo-textiles.

Other Metals: Solvent clean and abrasive blast to roughen and degloss the surface. Use XT1 Bonding Agent for greater adhesion.

Glass: Thoroughly clean. XT1 Bonding Agent must be used for increased adhesion. For immersion service roughen the surface.

Wood: Substrate must be clean, dry and free of surface contamination.

Previous Coatings and Linings: XT1 may be applied over some existing coatings and linings and achieve acceptable performance. XT1 Bonding Agent is recommended for greater adhesion. Finished system results vary due to a variety of project specific factors, including the service conditions to which the system is exposed. Therefore, Kingfield does not accept responsibility for determining the suitability of an existing coating as a substrate for XT1 products. Owner shall perform adhesion tests on any existing coating or lining to determine suitability.

Earth: Use XT1 Scrim.

Color

XT1 is initially shiny black, turning dull over 3 to 6 months when exposed to direct sunlight. For a colored or reflecting surface finish, see Kingfield Instruction Guide, "Topcoats" for further instructions.

Recommended Coverage

Recommended minimum thickness at all points of the coating is 60 wet mils. Higher coverages may be specified, but extended time is required to insure proper solvent release prior to placing the liner in service. Contact Kingfield for additional information.

Chemical Resistance

XT1 is resistant to a broad range of acids and alkalis. Consult Kingfield for additional information regarding chemical resistance after reviewing XT1 Chemical Resistance Chart.

General Application Information

Precautions: Avoid contamination with water or moisture. Keep all pails and jugs tightly closed until ready for use. All equipment, air supplies, and application substrates must be **ABSOLUTELY DRY**. Do not apply in wet weather or when rain is imminent or when the XT1 or the substrate may become wet within 4 hours after coating. Use caution when applying XT1 in confined spaces. See Kingfield' Instruction Guide, "Applying XT1 Within Confined Spaces".

Temperature: Surface should be at least 50°F (10°C) and must be 5°F (3°C) above the dew point. **DO NOT APPLY WHEN THE SUBSTRATE OR AMBIENT TEMPERATURE IS RISING OR COATING IS IN DIRECT SUNLIGHT**. XT1 should be at least 60°F (15°C) when mixed and applied. XT1 may be preheated to facilitate application at low temperatures, but working time will be reduced. See Kingfield' Instruction Guide "Applying XT1 Liners in Cold Weather".

Pot Life: About 30 minutes. Working time depends on temperature and method of application. Working time for spray application will be significantly shorter.

Priming: Porous substrates such as wood and concrete may be primed with XT1 61BG Epoxy Primer to minimize outgassing. The recoat window for XT1 61BG Epoxy Primer shall be no longer than 48 hours. See XT1 61BG Epoxy Primer Coating Profile for additional information. Perform adhesion tests to confirm adequacy of adhesion to primer.

Mixing: DO NOT THIN. DO NOT HAND MIX. Begin mixing each pail (4.5 gal.) of XT1 Premix using a power mixer (e.g. 1/2" drill and an eight inch mud mixer). Do not draw air into the mix. While mixing, slowly add one jug (0.5 gal.) of XT1 Activator to the pail. Once the XT1 Activator has been added, mix thoroughly for 3 FULL MINUTES. The proportions are premeasured. DO NOT ESTIMATE. Mixing Jigs and Timers from Kingfield help eliminate mixing errors and increase productivity on the job. See Kingfield' Instruction Guide, "Mixing XT1 Premix and Activator".

Application: Apply XT1 directly to a clean and dry substrate. Vertical surfaces will require multiple coats. See Kingfield specific substrate Instruction Guide for additional guidelines.

Safety Information: This product contains petroleum asphalt, petroleum distillates, amine compounds and/or other chemical ingredients. Adequate health and safety precautions should be observed during the storage, handling, application and curing. Refer to Kingfield Material Safety Data Sheets for further details regarding the safe use of this product.

Recoating: XT1 may be recoated in 1 hour and must be recoated soon after the coating no longer comes off on polyethylene (typically within 4 hours of mixing). If the liner has cured longer than this time, the surface must be severely abraded using surface grinder or other mechanical means, and be free of dust and debris. Use XT1 Bonding Agent for better adhesion. For immersion conditions, all coats shall be applied within 4 hours of each other, except at joint lines.

Spread Rate Note: Coverages are theoretical and do not account for waste, spillage, irregular surfaces, or application technique. Consult XT1 coverage chart for additional coverage information.

Curing Time: XT1 may be placed in service within 24 hours for non-aggressive service. Severe service applications may require a cure time of 72 hours or more. Contact Kingfield for specific recommendations.

Clean-Up: Use mineral spirits for clean-up of uncured material. Spray equipment must be flushed regularly during application to prevent material from setting up in the hose and pump. Cured material is very difficult to remove. Soaking in solvent will soften the material and may assist in its removal.

Shipping, Storage and Safety Data

Warning: Flammable. Use only in well ventilated areas. Do not store or use near open flame, sparks or hot surfaces. Keep tightly closed. Avoid contact with moisture or water. Keep out of reach of children.

Safety Information: This product contains petroleum asphalt, petroleum distillates, amine compounds and/or other chemical ingredients. Adequate health and safety precautions should be observed during the storage, handling, application and curing. Refer to Kingfield' Material Safety Data Sheets for further details regarding the safe use of this product.

Packaging: XT1 is available in mixed units of 5 gallons. Each unit consists of a container of premix and a smaller container of activator. Quantities have been premeasured to provide the proper mixing ratio, leaving sufficient room in the premix container to facilitate adequate mixing. Do not estimate proportions.

Shipping Premix Activator Weights: 5.0 Gallon Units = 40 lbs. per pail 5.5 lbs per jug (33 lbs. per case of 6)

Properties:

Flash Point = 101°F > 250°F
 Shipping Name = Coating Solution Not Regulated
 DOT Class = Class 3, UN1139, PG III Not Regulated

Storage:

Temperature = 20°F to 110°F 70°F to 95°F
 Shelf Life = 2 years 6 months
 NFPA = Class II Non Flammable

Test Results:

PROPERTY	RESULTS	TEST METHOD
Abrasion Resistance - Wt. Loss, Taber Abraser CS-17 Wheel 1000 gr./1000 rev.	1.2 mg. loss	ASTM D4060
Deflection Temperature	Below -60°F	ASTM D648
Elastomeric Waterproofing	Exceeds all criteria	ASTM C836 ASTM C957
Extension to Break	400%	ASTM D412
Flammability	Pass/combustible substrate Class A1	ASTM D2859 UL790
Hardness, Shore A	77°F 60	ASTM D2240
Jet Fuel Resistance	Pass for joints	FS SS-S-200D
Mullen Burst Strength	50 mil 150 psi	ASTM D751
Permeability to Water Vapor	Method E, 100°F 100 mil sheet 0.03 perms	ASTM E96
Salt Spray	Pass 2000 hrs.	ASTM B117
Service Temperature	-60°F to 220°F	
Softening Point, Ring & Ball	>325°F	ASTM D36
Tear Strength	(Die C) 150 lbs./ in.	ASTM D624
Tensile Strength	100 mil sheet 900 psi	ASTM D 412
Weathering	Pass 5000 hrs.	ASTM D822

Solids By Volume: 88%

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