



NCFI-2.2FX

Formerly 24-023

Technical Data Sheet

Material Characteristics

Strata-Fil Polyurethanes by NCFI are uniquely formulated, plural-component, low-exotherm systems designed for a variety of geotechnical applications, such as void filling, structural forming, and cavity filling. Each batch goes through stringent testing and quality assurance standards to ensure reliability in the field.

Applications

Pipeline Pads/Pillows
Trench Breakers
Low-Exotherm Void Filling
Low-Density
Rock Shields

Performance Profile

NCFI-2.2FX is a 2.2lb fast-reacting spray or pour system formulated for trench breaker applications and large, open void fills. Its low-exotherm profile supports thick lifts without overheating, and its quick reactivity makes it ideal for vertical and open-access placements.

Unique Advantages

Water Blown
Stable Exothermic Reaction

Reactivity at 110°F

Cream Time	1 second
Gel Time	5 seconds
Tack Free Time	8 seconds
Rise Time	23 seconds

Chemical Resistance

<i>Solvents...</i>	Excellent
<i>Mold and Mildew...</i>	Excellent

Physical Properties

Physical Properties	Test Method	Free Rise
Density	ASTM D1622	2.0 - 2.5 pcf
Compressive Strength	ASTM D1621	39 psi
Compressive Modulus	ASTM D1621	1755 psi
Tensile Strength	ASTM D1623	51 psi
Tensile Modulus	ASTM D1623	7275 psi
Max Service Temp		200°F
Shear Strength	ASTM C273	35 psi
Shear Modulus	ASTM C273	3612 psi

Special Testing

Flammability UL-94 HBDF	Pass
Moisture Vapor Transmission (ASTM E960)	2-4 perm.in

Dimensional Stability, % volume change, 28 days aging (ASTM D-2126)	Heat age at 200°F	Freezer at -20°F	Humid age at 95% RH & 158°F
	-0.2%	-0.1%	1.2%

Component Properties

Component	B-NCFI-2.2FX	A2-000
Appearance	Clear Amber Liquid	Clear Brown Liquid
Brookfield Viscosity @20rpm	580 cps at 72°F	200 cps at 72°F
Specific Gravity	1.07	1.24
Weight per Gallon	8.93 lbs	10.3 lbs
Storage Temperature	50-100°F	50-100°F

Mix Ratio

By weight... 100 parts poly: 116 parts iso
By volume... 100 parts A-side: 100 parts iso

Processing Parameters

ISO Temperature	100 – 130°F
Poly Temperature	100 – 130°F
Mixing Pressure	800 - 1200 psi

Storage and Handling

For optimum shelf life, the recommended storage temperature is 50°F to 100°F. **Do not expose A-side to lower temperatures – freezing may occur.** Avoid moisture contamination during storage, handling, and processing. After opening, pad the containers and day tanks with either nitrogen or dry air (desiccant cartridge or air dryer @ -40°F dew point). Store components at 70°F to 90°F for several days prior to use to minimize viscosity issues. Shelf life of B-side is 6 months and A-side is 2 years for factory sealed containers.

Application Cautions

Careful consideration should be given to selection and application of any NCFI Polyurethane foam system where excessive foam mass build-up can occur. Excessive polyurethane foam lift thickness will result in high internal temperatures within the injected foam, which can result in degraded foam properties, or in extreme cases, fire or spontaneous combustion. **Any flammability rating contained in this literature is not intended to reflect hazards presented by this or any other material under actual fire conditions.** Each person, firm or corporation engaged in the application, installation or use of any polyurethane product should carefully determine whether there is a potential fire hazard associated with such product in a specific usage and utilize all appropriate precautionary and safety measures. Please consult NCFI Polyurethanes for safety considerations, polyurethane system selection and application recommendations.

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