NCFI
Light-Weight Fill System

NCFI-2.2SHX

Formerly 24-039

Technical Data Sheet

Material Characteristics

NCFI-2.2SH is a hydrophobic/hydro-insensitive, two-component, water-blown polyurethane system. With a density of 2.2 lb per ft³, slow reactivity, and lower exotherm reaction it provides extended flow and high lift capability, making it well-suited for large-volume void fills, pipe and underground tank abandonment, and open-access projects in wet or saturated conditions.

Applications

Filling Large Voids
Pipe Abandonment
Underground Tank Abandonment
Soil Stabilization

ALS

NSF/ANSI/CAN 61 - 5".
*Upon Request

Unique Advantages

Low-Exotherm
Hydrophobic/Hydro-Insensitive
Contains No Solvents
Slow Reactivity
Excellent Flow

Reactivity at 110°F

Cream Time	2 seconds
Gel Time	56 seconds
Tack Free Time	165 seconds
Rise Time	106 seconds
Cure Time	30 min

Chemical Resistance

Solvents…	Excellent
Mold and Mildew…	Excellent

Performance

Wet Environments…	Excellent
Material Flow…	High

Physical Properties

Physical Properties	Test Method	Free Rise
Density	ASTM D1622	2.2 pcf
Compressive Strength	ASTM D1621	35 psi
Compressive Modulus	ASTM D1621	530 psi
Tensile Strength	ASTM D1623	37 psi
Tensile Modulus	ASTM D1623	928 psi
Water Absorption	ASTM D2842	≤0.08lbs/ft²
Closed Cell Content		>85%
Max Service Temp		200°F
Elongation	ASTM D1623	9.3%
Shear Strength	ASTM C273	37 psi
Shear Modulus	ASTM C273	2736 psi

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Component Properties

Component	B-NCFI-2.2SHX	A2-000
Appearance	Clear Amber Liquid	Clear Brown Liquid
Brookfield Viscosity @20rpm	650 cps at 72ºF	200 cps at 72ºF
Specific Gravity	1.056	1.24
Weight per Gallon	8.81 lbs	10.3 lbs
Storage Temperature	50-100ºF	50-100ºF

Mix Ratio

By weight…	*115 parts A-side: 100 parts B-side*
By volume…	*100 parts A-side: 100 parts B-side*

Processing Parameters

A-side Temperatures	100 – 120ºF
B-side Temperatures	100 – 120ºF
Mixing Pressure	1000 psi static 800 psi dynamic

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.