TERRATHANE™
GEOTECHNICAL POLYURETHANE

24-024
Technical Data Sheet

TERRATHANE™ Polyurethanes

TerraThane™ Polyurethanes by NCFI are uniquely formulated for a variety of geotechnical applications. Each batch goes through stringent testing and quality assurance standards to ensure reliability in the field.

About 24-024

TerraThane™ 24-024 is a hydrophobic/ hydro-insensitive, two-component, HFC-245fa blown, all PMDI-based, formula that is specially designed for quick expansion and pinpoint control for structural lifting and leveling. Due to its fast reaction and physical properties, it is highly versatile for different application designs.

24-024 APPLICATIONS

Fast Expansion Design
High Control for Structural Lifting
Void Filling Under Concrete Slabs
Excellent Physical Properties
Deep Soil Injection

Reaction Curve at 110°

Cream Time	4 second
Gel Time	21 Seconds
Tack Free Time	37 seconds

Physical Properties

Physical Properties	Test Method	Free Rise
Density	ASTM D1622	2.3 pcf
Compressive Strength	ASTM D1621	33.0 psi
Compressive Modulus	ASTM D1621	1100 psi
Tensile Strength	ASTM D1623	80 psi
Tensile Modulus	ASTM D1623	122 psi
Water Absorption	ASTM D2842	≤ 0.04 lbs/ft^2
Closed Cell Content		>94%
Max Service Temp		200°
Elongation	ASTM D1623	7.7%
Shear Strength	ASTM C273	38.5 psi
Shear Modulus	ASTM C273	282 psi
Flexural Strength	ASTM D790	32.3 psi
Flexural Modulus	ASTM D790	248 psi

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Component Properties

Component	B-24-024	A2-000
Appearance	Clear Amber Liquid	Clear Brown Liquid
Brookfield Viscosity @ 20rpm	600 cps at 72°	200 cps at 72°
Specific Gravity	1.07	1.24
Weight per Gallon	8.8 lbs	10.3 lbs
Storage Temperature	60° - 90°F	50° - 100°F

Performance

Wet Environments... **Excellent**

Lifting Capacity... **Excellent**

Chemical Resistance

Solvents... **Excellent**

Mold and Mildew... **Excellent**

Mix Ratio

By weight....100 parts poly : 117 parts iso

By volume...100 parts poly : 100 parts iso

* Using standard spray equipment with 1/1 by volume proportioning pumps capable of maintaining 800-1200 psi dynamic pressures. The Graco Reactor E20-series or better with a GX-7 gun is preferred equipment. NCFI 24-024 B is connected to the resin/polyol pump with the NCFI A being connected to the isocyanate pump.

Processing Parameters

ISO Temperature	100° - 140°F
Poly Temperature	100° - 140°F
Mixing Pressure	1000 psi static, 800 psi dynamic

Storage and Handling

Store the poly from 50°F to 90°F. Avoid moisture contamination during storage, handling, and processing. For both components, pad containers and day tanks with either nitrogen or dry air (desiccant cartridge or air dryer @ -40°F dew point). For optimum shelf life, the recommended storage temperature for iso is 50°F to 110°F. **Do not expose iso to lower temperatures – freezing may occur.** Store components at 70°F to 90°F for several days prior to use to minimize components being too viscous at time to take to field. Shelf life is 6 months 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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