

### 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 24-042

TerraThane™ 24-042 is a water blown, all PMDI-based, hydro-insensitive geotechnical polyurethane designed for soil stabilization, road bed construction, deep hole injection, and void-filling applications. The polymer is specially formulated for exceptional flow and functionality in saturated environments and available with an NSF/ANSI 61 Section 5 – 2017 certification.

### 24-042 APPLICATIONS

- Soil Stabilization
- Road Bed Construction
- Deep Soil Injection
- Void Filling
- Infrastructure stabilization



**CERTIFIED TO  
NSF/ANSI 61**

\*Upon Request

### Reaction Curve at 110°

<b>Cream Time</b>	5 seconds
<b>Gel Time</b>	16 Seconds
<b>Tack Free Time</b>	43 seconds

### Physical Properties

Physical Properties	Test Method	Free Rise	Restrained
Density	ASTM D1622	3.5 pcf	Packed to 5pcf
Compressive Strength	ASTM D1621	45 psi	65 psi
Compressive Modulus	ASTM D1621	750 psi	1300 psi
Tensile Strength	ASTM D1623	55 psi	78 psi
Tensile Modulus	ASTM D1623	800 psi	1200 psi
Water Absorption	ASTM D2842	≤ 0.08 lbs/ft <sup>2</sup>	≤ 0.06 lbs/ft <sup>2</sup>
Closed Cell Content		>92%	>94%
Max Service Temp		180°F	180°F
Elongation	ASTM D1623	5.5%	
Shear Strength	ASTM C273	55.2 psi	
Shear Modulus	ASTM C273	307 psi	
Flexural Strength	ASTM D790	68.4 psi	
Flexural Modulus	ASTM D790	1277 psi	

## Special Testing/Certifications

Dimensional stability, % volume change, 28 day aging (ASTM D-2126)	<b>Heat age at 158°F</b>	<b>Freezer at -20°F</b>	<b>Humid age at 100% RH &amp; 120°</b>
	-2.0%	-0.1%	-1.7%

### Performance

*Wet Environments...* **Excellent**

*Lifting Capacity...* **Excellent**

### Chemical Resistance

*Solvents...* **Excellent**

*Mold and Mildew...* **Excellent**

## Component Properties

Component	B-24-042	A2-000
Appearance	Transparent Amber Liquid	Clear Brown Liquid
Brookfield Viscosity @ 20rpm	440 cps at 72°	200 cps at 72°
Specific Gravity	1.05	1.24
Weight per Gallon	8.8 lbs	10.3 lbs
Storage Temperature	50° - 100°F	50° - 110°F

## Processing Parameters

ISO Temperature	100° - 130°F
Poly Temperature	100° - 130°F
Mixing Pressure	Minimum 1000 static, 800 dynamic psi

## Mix Ratio

**By weight...** 100 parts poly : 118 parts iso

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

## 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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