

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.

24-044 APPLICATIONS

- Concrete Lifting/Leveling
- Joint Matching
- Void Filling
- Concrete Undersealing
- Road and Bridge Approach Slabs
- Deep Soil Injection

About 24-044

NCFI Polyurethanes system 24-044 is a hydro-insensitive, plural component, polymeric MDIbased polymer system designed for concrete lifting/leveling, joint matching, void filling and concrete under-sealing in wet environments. 24-044 has been specially formulated for exceptional flow under concrete road or slab section(s).

Reactivity at 110°

	24-044 Fast	24-044
Cream Time	2 second	3 second
Gel Time	8 Seconds	14 Seconds
Tack Free Time	15 seconds	22 seconds
Rise Time	27 Seconds	47 Seconds

Physical Properties

Physical Properties	Test Method	Free Rise
Density	ASTM D1622	3.0 pcf
Compressive Strength	ASTM D1621	40 psi
Compressive Modulus	ASTM D1621	1155 psi
Tensile Strength	ASTM D1623	68.2 psi
Tensile Modulus	ASTM D1623	130 psi
Water Absorption	ASTM D2842	≤ 0.04 lbs/ft ²
Closed Cell Content		>92%
Max Service Temp		200°F
Elongation	ASTM D1623	6.1%
Flexural Strength	ASTM D790	69.4 psi
Flexural Modulus	ASTM D790	1490 psi



Special Testing/Certifications

NYDOT Hydro-insensitivity test, GTP-9	>92% density retention >93% comp str retention		
Dimensional stability, % volume change, 28 day aging (ASTM D-2126)	Heat age at 158°F	Freezer at -20°F	Humid age at 100% RH & 120°
	-1.7%	-0.1%	-1.8%

Performance

Wet Environments... **Excellent**

Lifting Capacity... **Excellent**

Chemical Resistance

Solvents... **Excellent**

Mold and Mildew... **Excellent**

Component Properties

Component	B-24-044	A2-000
Appearance	Transparent Black Liquid	Clear Brown Liquid
Brookfield Viscosity @ 20rpm	600 cps at 72°	200 cps at 72°
Specific Gravity	1.07	1.24
Weight per Gallon	8.9 lbs	10.3 lbs
Storage Temperature	50° - 100°F	50° - 110°F

Processing Parameters

ISO Temperature	110° - 130°F
Poly Temperature	110° - 130°F
Mixing Pressure	800 psi static, 600 dynamic psi, 1000/800 preferred

Mix Ratio

By weight... 100 parts poly : 116 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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