

## 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.

### 24-070 APPLICATIONS

Low to Extreme Void Filling  
Pipe Abandonment  
Underground Tank Abandonment  
Cavity Filling

## About 24-070

NCFI 24-070 is a two-component, HFO blown, low GWP, all PMDI based, pour-in-place urethane rigid foam system. 24-070 is a low-exotherm system with slow reactivity for greater flow. The system is ideal for filling large void areas, pipe abandonment, and underground tank abandonment.

### Reactivity at 110°

|                       |             |
|-----------------------|-------------|
| <b>Cream Time</b>     | 12 seconds  |
| <b>Gel Time</b>       | 150 Seconds |
| <b>Tack Free Time</b> | 250 seconds |
| <b>Rise Time</b>      | 340 seconds |

## Physical Properties

| Physical Properties  | Test Method | Free Rise                   |
|----------------------|-------------|-----------------------------|
| Density              | ASTM D1622  | 2.1 pcf                     |
| Compressive Strength | ASTM D1621  | 30.9 psi                    |
| Compressive Modulus  | ASTM D1621  | 744 psi                     |
| Tensile Strength     | ASTM D1623  | 52.0 psi                    |
| Tensile Modulus      | ASTM D1623  | 86 psi                      |
| Water Absorption     | ASTM D2842  | ≤ 0.044 lbs/ft <sup>2</sup> |
| Closed Cell Content  |             | >90%                        |
| Max Service Temp     |             | 200°                        |
| Elongation           | ASTM D1623  | 6.0%                        |
| Shear Strength       | ASTM C273   | 30.8 psi                    |
| Shear Modulus        | ASTM C273   | 200 psi                     |
| Flexural Strength    | ASTM D790   | 30.7 psi                    |
| Flexural Modulus     | ASTM D790   | 579 psi                     |

**TerraThane Geotechnical Division • NCFI Polyurethanes**

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**TERRATHANE™**

**24-070**

Technical Data Sheet



## Special Testing/Certifications

|   |  |                      |
|---|--|----------------------|
| <b>Flammability</b>                       | <b>FMVSS-302</b><br><b>FAR 25.853a(iii)</b><br><b>UL-94 HBDF</b> | Pass<br>Pass<br>Pass |
| <b>USGC Title 33, Chapter 1, Part 183</b> |  | Pass                 |
| <b>Initial K-Factor</b>                   |  | 0.167                |
| <b>Moisture Vapor Transmission</b>        |  | 2-3 perm inch        |
| <b>Overall Mold Density</b>               |  | 3.2 pcf              |

### Performance

*Wet Environments...* **NA**

*Lifting Capacity...* **NA**

### Chemical Resistance

*Solvents...* **Excellent**

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

## Component Properties

| Component                           | B-24-070       | A2-000             |
|-------------------------------------|----------------|--------------------|
| <b>Appearance</b>                   | Brown Liquid   | Clear Brown Liquid |
| <b>Brookfield Viscosity @ 20rpm</b> | 450 cps at 72° | 200 cps at 72°     |
| <b>Specific Gravity</b>             | 1.13           | 1.24               |
| <b>Weight per Gallon</b>            | 9.4 lbs        | 10.3 lbs           |
| <b>Storage Temperature</b>          | 40° - 90°F     | 40° - 90°F         |

## Processing Parameters

|                         |  |
|-------------------------|--|
| <b>ISO Temperature</b>  | 90° - 130°F  |
| <b>Poly Temperature</b> | 90° - 130°F  |
| <b>Mixing Pressure</b>  | 800 psi static, 600 psi dynamic,<br>1000/800 preferred |

## Mix Ratio

**By weight...** 100 parts poly : 112 parts iso

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

## Storage and Handling

Store the poly from 65°F to 85°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 of Resin is 6 months and ISO 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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