



TERRATHANE™ 24-035

Technical Data Sheet

TERRATHANE™ Product Line

The TerraThane™ product line is comprised of uniquely formulated, dual-component systems formulated for a variety of geotechnical applications, such as lifting, soil compaction, void filling, and I/I mitigation. Each batch goes through stringent testing and quality assurance standards to ensure reliability in the field.

TERRATHANE™ 24-035

NCFI 24-035 is a two-component, water blown, MDI-based spray polyurethane-polyurea hybrid system designed for use as a high strength backing material or primary surface material for stabilizing masonry surfaces. NCFI 24-035 has been formulated to spray at 6 – 8 pcf based on lift thickness.

APPLICATIONS

- Backing Material
- Stabilizing Masonry Surfaces
- Manhole Lining
- Pipe and Culvert Lining

UNIQUE ADVANTAGES

- Polyurethane / Polyurea Hybrid
- Exceptional Adhesion
- Contains No Solvents
- Water Blown System

Reactivity at 130°F

| | |
|-----------------------|-----------|
| Cream Time | 1 second |
| Gel Time | 2 seconds |
| Tack Free Time | 3 seconds |
| Rise Time | 3 seconds |

Chemical Resistance

| | |
|---------------------------|------------------|
| <i>Solvents...</i> | Excellent |
| <i>Mold and Mildew...</i> | Excellent |
| Performance | |

- Wet Environments...* **Excellent**
- Adhesion...* **Excellent**

Physical Properties

| Physical Properties | Test Method | Free Rise |
|-------------------------------|-------------|----------------------------|
| Density | ASTM D1622 | 6 – 8 pcf |
| Pull Off Strength to: | | |
| Dry Masonry Surface | ASTM D4541 | 400 psi |
| Wet Masonry Surface | ASTM D4541 | 145 psi |
| Scheduled 80 Galvanized Steel | ASTM D4541 | 131 psi |
| Aluminized Steel | ASTM D4541 | 145 psi |
| Neoprene | ASTM D4541 | 102 psi |
| HDPE | ASTM D4541 | 93 psi |
| Smooth PVC | ASTM D4541 | 223 psi |
| Sanded PVC | ASTM D4541 | 298 psi |
| Water Absorption | ASTM D2842 | ≤ 0.03 lbs/ft ² |
| Closed Cell Content | | >94% |
| Max Service Temp | ASTM D790 | 180° |
| Skin Shore Hardness | | 55 Shore A 12 Shore D |

Special Testing

| | |
|---|--|
| SEVERE Wastewater Analysis Testing (ASTM D-2842) | <ul style="list-style-type: none"> - No Visible Deterioration (foam color change to green) - Compressive Strength Loss = 0% - Tensile Strength Loss = 18% |
|---|--|

| | | | |
|---|--------------------------|-------------------------|---|
| Dimensional Stability, % volume change, 28 days aging (ASTM D-2126) | Heat age at 158°F | Freezer at -20°F | Humid age at 100% RH & 120°F |
| | -1.5% | -0.1% | -1.0% |

Component Properties

| Component | B-24-035 | A2-000 |
|------------------------------------|--------------------|--------------------|
| Appearance | Transparent Liquid | Clear Brown Liquid |
| Brookfield Viscosity @20rpm | 700 cps at 72°F | 200 cps at 72°F |
| Specific Gravity | 1.06 | 1.24 |
| Weight per Gallon | 8.85 lbs | 10.3 lbs |
| Storage Temperature | 50-100°F | 50-100°F |

*24-035 is not ASTM E-84 flame spread rated and is not to be used in applications governed by building codes.

** 24-035 has been formulated to spray at 6 – 8 pcf depending on lift thickness.

***Actual machine spray pressure settings may vary depending on module/chamber size or ambient conditions.

Mix Ratio

By weight... 117 parts A-side: 100 parts B-side

By volume... 100 parts A-side: 100 parts B-side

Processing Parameters

| | |
|----------------------------|--|
| A-side Temperatures | 110 – 140°F |
| B-side Temperatures | 110 – 140°F |
| Mixing Pressure | 1100 – 1500 psi static 800 – 1200 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.

The information contained herein is believed to be reliable, but no representations, guarantees, or warranties of any kind are made as to its accuracy, suitability for particular applications or the results to be obtained there from. The information is based on laboratory work with small-scale equipment and does not necessarily indicate end product performance. Because of the variation in methods, conditions and equipment used commercially in processing these materials, no warranties or guarantees are made as to the suitability of the products for the application disclosed. Full-scale testing and end product performance are the sole responsibility of the user. NCFI Polyurethanes shall not be liable for and the customer assumes all risk and liability of any use or handling of any material beyond NCFI's direct control. NCFI MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OR MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Nothing contained herein is to be considered as permission, recommendations, nor as an inducement to practice any patented invention without permission of the patent owner.