

**NCFI POUR-IN-PLACE SYSTEM 24-003**

**DESCRIPTION:**

NCFI 24-003 is a two-component, HFC 245fa blown, all PMDI-based, nominal 3 pcf density, pour-in -place urethane foam system designed for concrete jacking and cavity filling in wet environments. NCFI 24-003 has low component viscosities making the system suitable for either mechanical mix machines, high pressure (over 600 psi) impingement mixing machines or hand mixing.

**DISTINGUISHING CHARACTERISTICS:**

- Excellent Lifting Capacity
- Good Performance in Wet Environments
- Excellent Compressive Strength
- Good Dimensional Stability

**TYPICAL RESIN PROPERTIES:**

|                  | <u>24-003 R</u>           | <u>24-003 A</u>           |
|------------------|---------------------------|---------------------------|
| Viscosity @ 72°F | 475 cps                   | 200 cps                   |
| Lbs./Gallon      | 8.9 lbs.                  | 10.2 lbs.                 |
| Appearance       | transparent, amber liquid | transparent, brown liquid |
| Shelf Life       | 6 months                  | 6 months                  |

**MIX RATIO:**

|           | <u>24-003 R</u> | <u>24-003 A</u> |
|-----------|-----------------|-----------------|
| By Weight | 100 parts       | 116 parts       |
| By Volume | 100 parts       | 100 parts       |

**TYPICAL REACTION PROPERTIES:**

|                      | <u>Hand Mix</u> | <u>Machine Mix</u> |
|----------------------|-----------------|--------------------|
| Cream Time (sec)     | 20              | 7                  |
| Gel Time (sec)       | 47              |                    |
| Tack Free Time (sec) | 51              | 14                 |
| Rise Time (sec)      | 90              | 15                 |
| Density (FRC)        | 4.0 pcf         | 3.0 pcf            |

**TYPICAL PHYSICAL PROPERTIES:**

|                               |                 |
|-------------------------------|-----------------|
| Typical In-place Density      | 5.5 pcf         |
| Compressive Strength          | 100 psi         |
| Tensile Strength              | 150 psi         |
| Closed Cell Content           | >94%            |
| Water Absorption, ASTM D2842  | ≤0.04 lbs/sq ft |
| Resistance to Solvents        | Excellent       |
| Resistance to Mold and Mildew | Excellent       |
| Maximum Service Temperature   | 200°F           |

\*The above values are average values obtained from laboratory experiments and should serve only as guide lines.

## NCFI 24-003 APPLICATION INFORMATION

### EQUIPMENT AND COMPONENT RATIOS:

NCFI 24-003 should be mixed by pour machines designed to mix urethane chemicals. It is recommended that this system be processed with either HPIM machines or low pressure equipment with mechanical mix heads, both with the capability of controlling component temperatures to 60°F - 80°F. NCFI 24-003R is connected to the **resin/polyol** pumps with NCFI 24-003A being connected to the **isocyanate** pumps.

### STORAGE AND USE OF CHEMICALS:

Keep temperature of chemicals at 70 °F for several days before use. Cold chemicals can cause poor mixing, pump cavitation or other process problems due to higher viscosity at lower temperatures. Storage temperature should not exceed 100°F. Prolonged exposure to temperatures below 60°F can cause the 'A' component to freeze. Do not store in direct sunlight. Keep drums tightly closed when not in use and under nitrogen pressure of 2 - 3 psi after they have been opened.

### SAFE HANDLING OF LIQUID COMPONENTS:

Use caution in removing bungs from the container. Loosen the small bung first and let any built up gas escape before completely removing. Avoid prolonged breathing of vapors. In case of chemical contact with eyes, flush with water for at least 15

minutes and get medical attention. For further information refer to "MDI-Based Polyurethane Foam Systems: Guidelines for Safe Handling and Disposal" publication AX-119 published by Alliance For The Polyurethanes Industry 1300 Wilson Blvd, Suite 800, Arlington, VA 22209.

### Caution:

Polyurethane products manufactured or produced from this liquid system may present a serious fire hazard if improperly used or allowed to remain exposed or unprotected. The character and magnitude of any such hazard will depend on a broad range of factors which are controlled and influenced by the manufacturing and production process, by the mode of application or installation and by the function and usage of the particular product. ***Any flammability rating contained in this literature is not intended to reflect hazards presented by this or any other material under actual fire conditions. These ratings are used solely to measure and describe the product's response to heat and flame under controlled laboratory conditions.*** Each person, firm or corporation engaged in the manufacture, production, 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

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