

Product Evaluation

RE: NCFI 24-003

PRODUCT INFORMATION

Product Name: NCFI 24-003

Manufacturer: NCFI Polyurethane Inc.,
Clearfield, Utah

Website: <https://www.mccind.com/>

Supplier: Polysource Industries, Langley, BC

VENDOR CLAIMS AND INFORMATION

CLAIMS

NCFI 24-003 has low component viscosities making the system suitable for mechanical mix machines, high pressure (over 600 psi) impingement mixing machines or hand mixing. It has excellent lifting capacity, good performance in wet environments, excellent compressive strength and good dimensional stability. It has excellent Resistance to Solvents, Mold and Mildew. It has restrained Core Density of 5.5 pcf (88 kg/m³), Compressive Strength of 90 psi (620 KPa) and closed cell content of 94%.

DESCRIPTION

NCFI 24-003 is a hydrophobic, two-component, HFC 245fa blown, all PMDI-based, pour-in -place urethane foam system. Its maximum operating temperature is 93°C (200°F).

POTENTIAL USAGE

NCFI 24-010 is designed for concrete jacking and cavity filling in wet environments.

STANDARDS

ASTM D1621 - Standard Test Method for Compressive Properties of Rigid Cellular Plastics

ASTM D1622 - Standard Test Method for Apparent Density of Rigid Cellular Plastics

ASTM D1623 - Standard Test Method for Tensile & Tensile Adhesion Properties of Rigid Cellular Plastics

ASTM C273 - Standard Test Method for Shear Properties of Sandwich Core Materials

ASTM D790 - Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials

ASTM D2842 - Standard Test Method for Water Absorption of Rigid Cellular Plastics

ALBERTA TRANSPORTATION AND ECONOMIC CORRIDORS COMMENTS

EXPERIENCE

Transportation and Economic Corridors has used similar product for a void filling purpose.

APPLICABLE STANDARDS

Transportation and Economic Corridors specification 2.4 Culverts for grouting of abandoned culverts.

RECOMMENDATIONS

NCFI 24-003 be listed as a Potential Product under Transportation and Economic Corridors Products List, Void Filling – Proprietary, based on the information provided. Final acceptance as a proven product will be based on field performance.

RESTRICTIONS ON USE

Caveat:

- 1) High density pour foams may exhibit excessive heat and exotherm so testing should be done to qualify the thickness of pour for the end Mine-Fill/Void-Fill application. Too great of a pour could contribute to thermal splitting or fire.
- 2) Minimum compressive strength of 0.5 MPa is required to prevent future collapse of the culverts.

TRIAL PROJECTS

Rishi Adhikari

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