

Product Evaluation

RE: NCFI 24-010

PRODUCT INFORMATION

Product Name: NCFI 24-010

Manufacturer: NCFI Polyurethane Inc.,
Clearfield, Utah

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

Supplier: Polysource Industries, Langley, BC

VENDOR CLAIMS AND INFORMATION

CLAIMS

NCFI 24-010 has density of 40 Kg/m³ (2.5 pcf) for free rise application and 64 Kg/m³ (4.0 pcf) for molded application. It provides Compressive Strength of 241 KPa (35 psi) free rise application and 517 KPa (75 psi) for molded application.

DESCRIPTION

NCFI 24-010 is a two component, water blown, all PMDI based low density spray polyurethane foam system. It is dispensed using 1/1 by volume ratio equipment. This system is available in slow, regular and extremely fast (for Sub-Arctic conditions) speeds.

POTENTIAL USAGE

NCFI 24-010 is designed for soil stabilization, roadbed construction, deep hole injection and void filling.

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 and 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 24-010 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

cc New Products Evaluation Group – Kristen Tappenden,
Tyler Donovan / Dominique Grell / Bradley Maguire