



TECHNICAL DATA SHEET

PRODUCT: RR 401

Applications

- Residential, Commercial & Highway
Thick/Heavy Slabs
High/Heavy Traffic Areas

RR 401 Foam was developed to have a fast reaction time and less spread to have more control when lifting smaller slabs of concrete. Designed to mimic the speed of traditional hydraulic mudjacking, this is the first HMI foam specifically for residential polyurethane concrete raising. Twice the density of the RR201 this foam is specially designed for heavy lifting and high traffic areas. Exceeds typical specifications for DOT under-sealing projects.

This foam is also designed to seal the exterior of foundation walls as an alternative to a rubber membrane or tar, as it will seal cracks and waterproof the wall.

RR 401

Density ASTM D1622

Average (lbs./ft³) 4

Shear Properties ASTM C273

Modulus (PSI) Proportional Stress 196

(psi) Proportional Elongation (%) 34.6

Breaking Strength Stress Avg. (psi) 17.6

Breaking Strength Elongation (%) 71.0

Compression Properties ASTM D1621

Modulus (psi) 2432

Proportional Stress (psi) 63.3

Proportional Elongation (%) 3.3

Crushing Strength Stress Avg. (psi) 81.9

Crushing Strength Stress Peak (psi) 112.2

Crushing Strength Elongation (%) 7.4

HMI Testing

Time at Reaction (mm:sec) 00:19

Peak Exotherm (°F) 273

Time at Peak Exotherm (mm:sec) 00:29

Time at Tack Free (mm:sec) 00:27

Time at Peak Expansion (mm:sec) 00:35

Tensile Properties ASTM D1623

Modulus (PSI) Proportional Stress 4590

(psi) Proportional Elongation (%) 115.9

Breaking Strength Stress Avg. (psi) 2.5

Breaking Strength Elongation (%) 115.9

2.5

Water Absorption ASTM D2842

Absorption by Volume (%) 0.10

Open Cell Content ASTM D2856

Closed Cell Content 89.7 ± 1.6%

Volume Change ASTM D2126

Change from Initial Volume (%) -0.25

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EQUIPMENT AND COMPONENT RATIOS:

The two part polyurethane process will give optimal performance when all systems are operating in correct sequence. Recirculate the material well before use. RR A (part A) is connected to the isocyanate pump with HMI Polyol (part B) connected to the resin/polyol pump. Part A and Part B must be mixed on a 1:1 ratio for designed reaction time, expansion rate, cure time, and density. It is recommended that this process be operated with a HMI Fusion Pro gun.

STORAGE OF CHEMICALS:

Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from heat, sparks, open flame, strong oxidizers, radiation and other initiators. Keep container tightly closed and sealed until ready for use. Do not store above 100°F. Do not allow material to freeze; Condensation and moisture can cause the material to crystalize.

SAFE HANDLING OF LIQUID COMPONENTS:

Take skin, auditory, eye and respiratory safety precautions during material handling and installation. Avoid breathing vapors or spray mists for long periods of time. Avoid contact with eyes, skin, and clothing. In case of eye contact, gently flush eyes with large amounts of water for at least 15 minutes and get prompt medical attention. If chemicals contact with clothing and skin, remove contaminated clothing and launder. Flush skin with lukewarm water for at least 15 minutes and seek medical attention if irritation to skin occurs. For more information, refer to *Polyol Resin Blends Safety and Handling Guidelines* (Technical Bulletin AX228) issued by Alliance for the Polyurethanes Industry. Arlington, VA: American Plastics Council.

CAUTION:

If used incorrectly, the polyurethane foam may present a serious fire hazard. Part A and Part B mix to make foam that creates a chemical reaction which produces heat and fumes. While installing material, inject material, wait for expansion, wait to cool off, and then install additional material. DO NOT install additional material before this reaction is complete. Applying foams too thick in a single injection can build dangerously high temperatures inside the finished foam, which could lead to splitting, charring, or even spontaneous combustion. HMI recommends that thickness not exceed two inches for closed celled foams. If multiple passes are sprayed or injected, sufficient time must be allowed for the exothermic heat to dissipate before each additional injection is applied. The foam applicator/contractor engaged in the application or use of polyurethane material should be made aware of the combustibility of the foam and fire hazards it can present if misused or over applied. Proper precautions and safety measures should be utilized.

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