

105

HIGH PRESSURE INJECTION POLYURETHANE

GENERAL DESCRIPTION

Emecole Metro 105 is a hydrophilic two-component (the second component being water), NON-FLAMMABLE VOC compliant polyurethane injection resin designed to control water and to seal moving, non-structural cracks in concrete. When mixed, the two-component system does not require additional water to foam within 30 seconds of passing through a static mixer. The components of Emecole Metro 105 expand and quickly cure to a flexible, closed cell foam. It is similar to other hydrophilic foams, such as Emecole Metro 104 except that its viscosity is 100 cps (versus 600-800 cps for Emecole Metro 104). It is better suited for tight cracks. Emecole Metro 105 is formulated TDI free.

Emecole Metro 105 cures to tough, adhering foam capable of withstanding thermal cycles and crack movement. It is offered in 22 oz. dual cartridges.

Emecole Metro 105 is also available as a one-component system utilizing the moisture in the crack for foam expansion. As one component, it is available in 5-gallon containers. More consistent and predicible foam formation and properties are attained when utilized as a two-component system.

PHYSICAL PROPERTIES (AS A 2-COMPONENT SYSTEM)

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|---------------------------------------|-------------|
| • Tensile Strength (ASTM D 3574-86) | 380 PSI |
| • Tensile Elongation (ASTM D 3574-88) | 400% |
| • Bonding Strength | 150-300 PSI |
| • Shrinkage | < 5% |
| • Flash point (of uncured components) | >225°F |
| • Viscosity | 100 cps |

QUANTITY TO USE:

It is difficult to determine the amount of material to adequately seal a given crack. Experience in home foundation cracks (8' long with a wall thickness of 8-10") suggest the usage of 10-21 ounces of Emecole Metro 105 per 8' crack (versus an average of 30-50 ounces of epoxy). Thus, while Emecole Metro 105 can theoretically foam to 4-5 times its volume (more typical is 2-3 times), its unfoamed volume for small cracks (1/32 - 1/4") as often found in foundation cracks.

PROCEDURE

Step 1 – Cleaning/Sealing Crack Surface - When crack is contaminated on outside, it will be necessary to clean the crack surface, so the crack can be exactly located. If a wide crack or high waterflows are encountered, it will be necessary to seal the surface of the crack with a surface sealing material; (e.g., hydraulic cement or epoxy gel). The surface sealing can be done before or after applying either surface ports or packers (depending on the particular situation).

Step 2 – Install Surface Ports (for low pressure injection) - Space the surface ports the width of the concrete and place the surface ports directly over the crack. Bond with hydraulic cement or epoxy gel (epoxy gel when crack surface is dry).

Step 3 – Surface Seal Crack - Sometimes it may be necessary to surface seal the crack to prevent the unreacted grout from flowing back out. Use fast-setting hydraulic cement or epoxy gel to form a surface seal on crack (epoxy gel is recommended when surface is dry).

Step 4 – Injection of Emecole Metro 105 - Begin the injection at the lowest port (surface or packer) on a vertical crack, or at the first port flushed for a horizontal crack. During injection, you will notice that water is displaced from the crack by Emecole Metro 105. Keep injecting until material appears at the adjacent port. Disconnect and start injection at adjacent packer (surface port). After injecting a few ports, come back to the first port and inject all the ports for the second time. Some of the ports may take some grout, which will fill up and further densify the crack. Injection pressure will vary from 20 psi - 250 psi, depending on the width of the crack, thickness of concrete and condition of concrete.

WARRANTY

Recommendations concerning the performance or use of this product are based upon independent test reports believed to be reliable. If the product is proven to be defective, at the option of the Manufacturer, it will be either replaced or the purchase price refunded. The Manufacturer will not be liable in excess of the purchase price. The user will be responsible for deciding if the product is suitable for his application and will assume all risk associated with the use of the product. This warranty is in lieu of any other warranty expressed or implied, including but not limited to an implied warranty of merchantability or an implied warranty of fitness for a particular use.