MULTIURETHANES DATA SHEET

# MME FLEXIBLE RESIN

## Flexible Hydrophobic Polyurethane Grout

### Product Overview

**MME FLEXIBLE RESIN** is a low-viscosity, single-component polyurethane resin specifically designed for injection into fine cracks. When it comes into contact with water, it reacts to form a flexible, hydrophobic foam barrier that effectively stops leaks and seepages. This resin is safe for use near potable water and provides a durable, long-term solution for preventing water infiltration in concrete structures. The reaction time of the resin can be adjusted using **MME FLEXIBLE ACCELERATOR**, a catalyst that allows for precise control of curing speed based on site-specific conditions. Once cured, the hydrophobic foam repels water, maintaining its size and flexibility without shrinking or expanding.


### Key Features

- **Suitable for Potable Water**: Certified safe for use in applications near drinking water sources.
- **Retains Strength, Size, and Flexibility**: Once cured, the resin maintains its structural integrity, remaining stable without shrinking or expanding.
- **Controlled Reaction Time**: The curing speed can be precisely controlled by varying the dosage of accelerator, allowing for flexibility in different site conditions.
- **Resistant to Corrosive Environments & Temperature Fluctuations**: The hydrophobic foam remains stable and effective even in harsh environments, making it suitable for a wide range of applications.
- **Solvent-Free and Non-Toxic**: Safe for use in sensitive areas without compromising environmental and safety standards.

### Applications

**MME FLEXIBLE RESIN** is ideal for concrete crack injection in a wide range of structures, including residential basements, underground parking garages, wastewater treatment facilities, potable water tanks, underground concrete chambers, and other concrete structures where construction joints are expected to move and expand over time.

### Physical Properties of Uncured Materials

| Property | MME Flexible Resin | MME Flexible Accelerator | Test Method |
|---|---|---|---|
| **Colour** | Clear to light yellow | Clear to light yellow amber | Visual |
| **Relative Density** (25°C / 77°F) | 1.04 – 1.07 | 1.009 – 1.02 | ASTM D891 |
| **Viscosity** (25°C / 77°F) | 400 - 600 cP | 32 – 52 cP | ASTM D2196 |
| **Storage Stability** | Up to 12 months | Up to 12 months | |
| **Packaging** | 4 kg bottles<br>20 kg pails | 500 g bottles<br>2 kg bottles | |

NSF/ANSI/CAN 61 by WQA.
Refer to www.wqa.org for restrictions and limitations.

### Physical Properties of Cured Materials

| Property | Value | Test Method |
|---|---|---|
| **Tensile Strength** | 140 – 180 psi | ASTM D638 |
| **Elongation** | 45 – 85% | ASTM D638 |
| **Shrinkage by Weight** | 0% | In-House |
| **Shrinkage by Volume** | 3% | In-House |
| **Toxicity** | Non-Toxic | |

### Catalyst Effect on Gel Time (at 25°C/77°F)

| Accelerator Level | Start of Rise | Top of Rise |
|---|---|---|
| 1% | 110 s | 480 s (8 min) |
| 3% | 40 s | 300 s (5 min) |
| 10% | 15 s | 90 s |

**Note**: The temperature of the components also affects the reaction time; hotter materials decrease the reaction or working time, while colder materials increase it. Also, pH and other factors present within the application site may affect the reaction or work time.

**MME MULTIURETHANES LTD.**
5245 CREEKBANK RD, MISSISSAUGA, ON L4W 1N3
TEL: 905-564-7650 | TOLL-FREE: 1-800-663-6633
multiurethanes.com

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### Application Guidelines

- **Hand-Mix Reactivity Check**: A pre-blend reactivity test can be performed by hand-mixing in cups. **MME FLEXIBLE ACCELERATOR** can be added to **MME FLEXIBLE RESIN** prior to mixing with water to accelerate the reaction time. The recommended procedure for a reactivity check is 100 parts by weight of resin, 10 parts by weight of accelerator, and 5 parts by weight of water.

- **Preparation**: Drill 3/8" diameter holes at a 45 to 60-degree angle to intersect the crack or construction joint at the mid-point of the wall. Alternate the drill holes on each side of the crack. Flush drill holes to remove drilling dust and debris before installing packers. Inject cracks using **Multiurethanes CRACK FLUSHING AGENT**, followed by the injection of clean water to remove contaminants. Select the appropriate accelerator ratio and verify that the resulting cure time meets project specifications. A typical accelerator dosage is 2% for most concrete crack injection work; adjust to as low as 1% for a slower reaction time or up to 10% for a faster reaction time.

- **Application**: Wipe containers to prevent contamination by moisture. At a dry location, pre-mix with the desired ratio of accelerator. Mix thoroughly until the mixture is well-blended, ensuring no air is entrained. If necessary, pre-flush the injection site to ensure enough water is present to activate the resin. Inject using a single-component injection pump. Always use separate pumps for resin and water.

- **Activated Oakum Technique**: Saturate **Multiurethanes OAKUM** rope with water-activated resin. Pack the activated material firmly into the crack or joint as required.

- **Cleanup**: Flush all pumps, hoses, and injection accessories with **Multiurethanes PUMP CLEANER** immediately after use to prevent material buildup and damage to equipment.

### Limitations

- Reaction occurs with any moisture present.
- Reaction times increase as ambient temperature decreases.
- Reduction in shelf life after the container has been opened.

### Safety & Handling

Wipe resin containers to avoid contamination by moisture. Keep the container closed when not pouring. Beware of pressure build-up in a closed container. Follow all current regulations and standards. Wear suitable protective equipment to prevent contamination of your skin or eyes. Ensure adequate ventilation and avoid breathing vapours. This material is intended for use by professionals with the proper equipment and training. Refer to the Safety Data Sheet (SDS) for detailed information on first aid.

### Related Equipment

Use with **Multiurethanes** chemical grout injection pumps such as the **IMPACT X410 PUMP, PRESIDENT PUMP, and LEVER GUN**.

### Customer Service & Orders

For additional information, please contact us at 1-800-663-6633 or info@multiurethanes.com.

Preparing injection holes for the application of MME FLEXIBLE RESIN to seal active water leaks in concrete.

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**multiurethanes.com**