



# CHEM SEMIRIGID

Moisture activated polyurethane chemical grout sealant  
used to control water infiltration in concrete

CHEM SEMIRIGID is a moisture activated polyurethane chemical grout sealant containing prepolymer isocyanates (MDI). CHEM SEMIRIGID is a single component, solvent free non toxic product which reacts with water to form a hydrophobic semi rigid and chemically resistant foam. Once the product has completed its reaction, the foam becomes a completely inert material. CHEM SEMIRIGID reacts rapidly with water and can expand up to 15 times its volume.

## ■ USES

CHEM SEMIRIGID is used to stop high pressure water infiltrations and to waterproof concrete structures.

### TYPICAL USES:

- Bridges and tunnels
- Manholes and vaults
- Basement foundations
- Crack and joint repairs when movement of cracks or joints is moderate
- To quickly fill medium sized voids in concrete
- Stopping high pressure and high volume water infiltration

## ■ PRODUCT FEATURES

- Semi rigid hydrophobic closed cell foam
- 100% water reactive, non flammable, V.O.C. compliant grout
- Low Shrinkage
- Environmentally friendly, becoming completely inert after cure
- Low viscosity
- Expansion rate can be controlled by varying the accelerator %
- Remains semi rigid after cure
- Easy to use
- Highly resistant

## ■ SURFACE PREPARATION

In order to properly prepare for material injection drill holes and install injection ports. To determine pattern, angle and depth of the drill holes and injection port placement a thorough study is suggested. Please consult your local BMQ SOLUTIONS representative for installation procedures.

## ■ PRIMING

No primer required.

## ■ PRODUCT MIXING

- Add between 1% and 5% Rigicel Accelerator to Resin depending on the desired setting time.
- Mix thoroughly until homogeneous.

## ■ PRODUCT APPLICATION

Install using a single component injection pump

## ■ CURING

CHEM SEMIRIGID is a self-curing material.

## MATERIAL PHYSICAL PROPERTIES @ 25°C (77°F)

UNCURED PROPERTIES		CURED MATERIAL	
<b>CHEM SEMIRIGID Resin</b>		Toxicity	1,074
Solids content ASTM D1259	100 %	Tensile Strength ASTM D3574 Test E	482,6 KPa (70 lbs/po2)
Viscosity ASTM D4889	160 cps @ 20°C	Elongation ASTM D3574 Test E	50 %
Color	Dark brown	Toxicity	Non-toxic
Density ASTM D4659-B	1,114		
Flash point ASTM D93	>COV 185°C		
Corrosiveness	Non-corrosive		
<b>RIGICEL Accelerator</b>			
Viscosity ASTM D4889	15 cps @ 20°C		
Flash point ASTM D93	>COV 160°C Liquide		
Appearance	Clear liquid (Amine odor)		
Toxicity	Non-toxic		

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### ESTIMATING / YIELD

Yield will be a function of the temperature of the unit injected and the percentage of the accelerator used.  
Estimation of material required will depend on the type of structure injected. BMQ SOLUTIONS recommends contacting an approved applicator for a more precise evaluation of the quantities required.  
Resin: 20 kg (5 gal) pail  
Accelerator: 900 ml (16 oz.) can

### PRECAUTIONS / RESTRICTIONS

Minimum application temperature, 5°C (41°F).

### PACKAGING

**CHEM SEMIRIGID :**

Resin: 20 kg containers

**RIGICEL :**

Accelerator: 900 ml containers

### RECOMMENDED TOOLS

The following tools will assure a cost effective, satisfactory installation:

- Percussion drill with 3/8" drill bit
- 3/8" injection packers with zerk fittings
- Single component injection pump  
(Similar to the Titan 440E modified for polyurethane injection)  
*Please contact your local BMQ SOLUTIONS representative or approved applicator for details concerning equipment and its use.*

### CLEANING

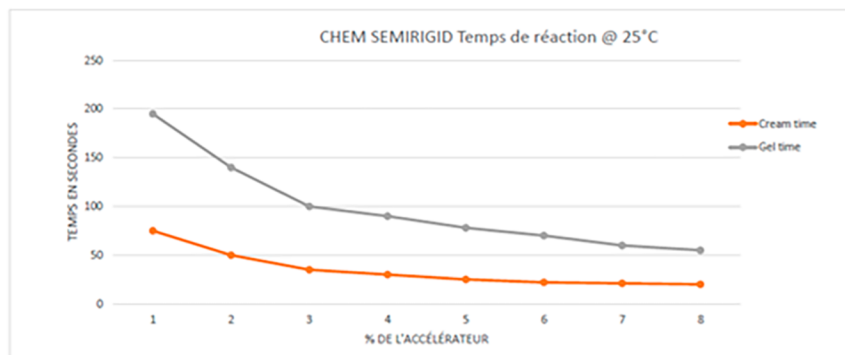
Use an appropriate polyurethane cleaner to clean all tools and equipment.

### STORAGE

Store in cool dry area avoiding all moisture. Keep container well-sealed between uses. Do not allow material to freeze.

### SAFETY

See Material Safety Data Sheet.



BMQ SOLUTIONS WARRANTS that the product conforms to its chemical description and is reasonably fit for the purpose stated on its Technical Data Sheet when used in accordance with its directions. BMQ Solutions makes NO OTHER WARRANTY either expressed or implied.  
Buyer assumes all risk in handling.

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