

WEBAC FLEXGEL

HYDROPHILIC POLYURETHANE FOAM - GEL SINGLE COMPONENT - LOW VISCOSITY

WEBAC FLEXGEL

TYPE OF MATERIAL

WEBAC FLEXGEL is a single component hydrophilic polyurethane grout.

The product cures to a closed cell foam or a gel when it comes in contact with water. The product is capable of incorporating large amounts of water that are multiples of its own mass, thereby forming a gel. The cure time of the product is determined by the amount of water added and the temperature.

While reacting to a foam the material expands its volume. The cured material is flexible. Since water is a component of the cured product structure, the material can be effected by wet and dry cycles. The reacted material may shrink and swell as a result of the surrounding moisture content.

The capability of the cured product to swell and increase in volume due to water absorption is one of the important features that discriminate hydrophilic grouts from their hydrophobic counterparts.

WEBAC Flexgel is designed as a single component material. In certain applications an accelerator may be added to decrease gel-time.

RANGE OF APPLICATION

- **Stop water infiltration**
- **Sealing joints**
- **Sealing of pipe joints through commercial packer equipment for repairing leakages in sanitary and storm sewer pipes**
- **Pipe Intrusions**
- **Sewers, Manholes, Utility Boxes, etc.**
- **Tunnels, Dams**
- **Soil Stabilization**

PROCESSING

WEBAC FLEXGEL is cured upon reaction with water. Large quantities of water can be absorbed in the reaction mass, and the properties of the cured product are determined by the mix ratio.

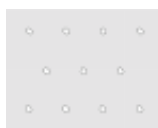
Mixing WEBAC FLEXGEL with water at a 1:1 to 1:3 volume basis will result in a foam with good tear resistance.

In the range of 1:4 to 1:10 a gel is obtained. Lower water ratios result in a strong gel of a light cellular structure. The more water is added the gel gradually softens and the cellular appearance changes towards a monolithic structure.

Single component injection equipment may be used to achieve certain results. Hydrophilic grouts can absorb large amounts of water and simultaneous injection of water might be recommended in applications where

gelling of the grout is desired. Two component equipment can may utilized to achieve a certain mixing ratio such as needed for commercial sewer repair. The grout can be applied much in the same manner as acrylamide grout with the advantage of having superior strength and safety features.

For 'curtain injection' behind below grade structures it is recommended to drill through the structure in a pattern that is determined by the physical properties of the soil. To create a standard pattern holes are drilled 50 cm (two feet) apart from each other in a horizontal line.



The next step is to drill holes in a line 50 cm above the first line in the same fashion but staggered. Recommended packers are WEBAC 19-150 buttonhead type.

Smaller packers like the 1/2" 13-60s type may be sufficient in some lower volume applications

Injection should begin at the highest point. Each packer should be injected until material penetrates the surrounding drill holes (open packers). After injection is complete packers should be removed and drill holes be filled with a cementitious grout.

It is essential for all equipment that comes in contact with the grout to be dry. If reaction of the batch occurs while pumping, immediately shut down the machine and flush with a cleaner to avoid built up and clogging of the equipment.

Observe temperature and humidity of the environment, since both determine the pot-life of the batch.

MAINTENANCE OF EQUIPMENT

Remove all excess sealant and any smears. Tools and mixing equipment are best cleaned immediately after use. WEBAC provides R70 Pump Flush, a solvent free, nonflammable, nonhazardous cleaner. Xylol, Toluol, Acetone and M.E.K. can be used if not in conflict with regulations on jobsite. Circulate cleaner through pump for several minutes. Caution! Some cleaners are combustible.

PRECAUTION

While working with WEBAC materials safety goggles, gloves and safety clothing should be worn at all times. Also observe container labels, MSDS, and instructions in the WEBAC Product Catalog. In case one of the components comes in contact with the skin, wash thoroughly with soap and water. Adequate ventilation in volume and pattern should be provided in working area. Further protection: emergency showers and eyewash stations.



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HYDROPHILIC POLYURETHANE FOAM - GEL

TECHNICAL DATA	FLEXGEL
Appearance	Light Brown
Color	Amber
Solids	90-95% ASTM D 1010
Density, g/ml	1.12 ASTM D 3574
Flash Point, C / F	>225 ASTM D 93-85
Viscosity, cps	300-400 ASTM D 1638-74
Corrosiveness	Non-Corrosive
Solubility in Water	Gelation
Components	Polyurethane Resin
Packaging	5 Gal 55 Gal
Storage	Good storage stability for unopened containers at 15° - 30° C 58° - 85° F. Store indoors.
Cured Product	
Induction Time, 20C/68F	<30 sec
Gel time, 20C/68F	>90 sec (1:2 Water)
Elongation, %	400-800 ASTM D3574 is variable with water content
Tensile Strength	300-350 psi ASTM D3574 variable with water content
Shrinkage	<10% ASTM D1042 variable with water content
Appearance	Light Amber Foam - Gel
Toxicity	Fully Cured Essentially Non-Toxic



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