de neef®

HA MULTIGEL NF

Product Description

HA Multigel NF is a hydrophilic polyurethane designed to react with water and form a water impermeable gel mass. HA Multigel NF is a pale yellow, nonflammable liquid. When it comes into contact with water, the grout begins to foam or gel, and depending on the temperature and amount of water present, quickly cures to a flexible, impermeable foam or gel mass unaffected by mildly corrosive environments. Cure times can be modified using accelerator (HA Flexgel Cat W) and gel strength can be increased using reinforcing agent. HA Multigel NF has a 4V expansion at 1:1 resin:water ratio.

Applications

- Stopping infiltration into manholes (brick or concrete).
- Sealing of pipe joints using commercial packer equipment.
- Stabilization of soil
- Potable water tanks and storage
- Curtain wall grouting below grade structures

Packaging & Handling

HA Multigel NF:	6 gal metal pail, 25Kg
Flexgel Cat W:	64 oz. plastic bottle.
Reinforcing Agent:	5 gal metal pail

Multigel NF is sealed under dry nitrogen and should be stored in original containers in a dry area. Storage temperature must be between 40°F and 90°F. Once the packaging has been opened, the useful life of the material is greatly reduced and should be used as soon as possible.

Shelf life: 2 years.

Product Advantages

- Non-flammable
- Contains no volatile solvents
- High penetration rate through soils
- Can be injected through remote internal pipe packer equipment
- Grouted soils can be excavated
- Multi-grout to water ratios

Properties

HA Multigel NF Resin		
Solids	78%	ASTM D2369
Viscosity	200 cp	ASTM D2196
Color	Clear to yellow liquid	
Density	1.08 g/cm³	ASTM D4659
Flashpoint	225°F	ASTM D93
Corrosiveness	Non-corrosive	
HA Flexgel Cat W		
Viscosity	6 cp	ASTM D2196
Color	Pale white liquid	
Flashpoint	>350°F	ASTM D93
Reinforcing Agent (add only to water side)		
Viscosity	500 cp	ASTM D2196
Color	Milky white liquid	
Flashpoint	212°F	ASTM D93
HA Multigel NF Cured		
Wet tensile strength 1/6 ratio	23-35 psi (10% Reinforcing Agent) 29-51 psi (20% Reinforcing Agent)	
Gel time at 68 °F	50 seconds (pH 7 / ratio 1/2 to 1/6)	
Shrinkage	None (68 °F and 100 % RH)	
Compressive strength in soil	1/1 1/6	392 psi 203 psi

Installation Guidelines

Warning: Consult the Technical Data Sheets and SDS before using.

Installation Instructions: HA Multigel NF should be pumped with a plural component pump. Prior to installation the material should be agitated by vigorously shaking or using a jiffy mixer or bung mixer. HA Multigel NF is cured by reaction with water. The properties of the cured product are determined by the mix ratio.

Combining HA Multigel NF and water at 1:1 volume ratio yields a very flexible foam with good tear resistance. In the range of 1:2 to 1:8 a strong gel is obtained.

HA Multigel NF: Water

Foam		Strong Gel			Flaccid Gel	
1:1	1:2	1:4	1:6	1:8	1:10	1:12

Adding Reinforcing Agent up to 50% on the waterside to HA Multigel NF will increase grout strength and reduce shrinkage if ground water levels vary. The addition of Reinforcing Agent will also accelerate the setting time of HA Multigel NF. Acceleration can also be achieved by adding HA Flexgel Cat W to the waterside up to 64 ounces per 5 gallons of HA Multigel NF.

HA Multigel NF: Water ratio

	1:1	1:5	1:8
°F	Gel time	Gel time	Gel time
40	2’27”	1’55”	2’01”
50	1’47”	1’25”	1’35”
60	1’12”	1’00”	1’15”
68	1’02”	45”	1’03”
77	52”	43”	46”

Injection: During injection the grout will follow the path of least resistance. When the material has stopped penetrating it will continue to expand against the limits of the confined space and compress within itself,forming a dense, closed cell foam.

Extreme conditions: For application procedures in extreme temperatures and specific environments or equipment recommendations call the DeNeef Technical Service Department.

Cleaning: Clean all tools and equipment which have been in contact with the resin with DeNeef Washing Agent before resin has cured. Products should be disposed of according to local, state, and federal laws.

Health and Safety

Always use protective clothing, gloves and goggles consistent with OSHA regulations. Avoid eye and skin contact. Do not ingest. Refer to SDS. **For emergencies, call CHEMTREC 1-800-424-9300.**

Limitations

Low temperatures will significantly affect viscosity. If site temperatures are extremely low, heat bands or heated water baths may be used on the pails before and during installation to maintain the product’s temperature. Avoid splashing water into open containers, as the material is water activated.
Avoid exceeding 90˚F when warming.

CAUTION: pH NOTICE. Water used to activate PURe Grouts must be in the pH range of 3-10 for optimum foam quality.

GCP Applied Technologies Inc., 62 Whittemore Avenue, Cambridge, MA 02140 USA.

In Canada, 294 Clements Road, West, Ajax, Ontario, Canada L1S 3C6.

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