

# TECHNICAL INFORMATION

## URETHANES

### PRODUCT NAME

## HYDRO ACTIVE® Soil

Hydrophobic Polyurethane Grout

### MANUFACTURER

De Neef Construction Chemicals, Inc.  
5610 Brystone Drive  
Houston, TX 77041  
1(800) 732-0166

### PRODUCT DESCRIPTION

HYDRO ACTIVE® Soil is a hydrophobic polyurethane that, when used alone or with HYDRO ACTIVE® Soil Cat, is designed to increase the bearing capacity of permeable soil. In its uncured form, HYDRO ACTIVE® Soil is a blackish-brown nonflammable liquid. When it comes in contact with water, the grout slightly expands and, depending on temperature and amount of accelerator (HYDRO ACTIVE® Soil Cat) used, quickly cures to a very dense open cell foam that is essentially unaffected by corrosive environments and micro organisms.

### APPROPRIATE APPLICATIONS

- Stabilize soil beneath slabs and roadways
- Create below grade water cut-off curtain wall
- Confine below grade movement of hazardous materials

### ADVANTAGES

- Free Foam Expansion up to 3 times its liquid volume
- Contains no volatile solvents
- Very high strength with low creep
- Extremely low viscosity and controllable reactivity permit injection into tight soils ( $10^{-4}$  cm/sec)

### PHYSICAL PROPERTIES

#### Uncured

Solids	100%	ASTM D 2369 B
Viscosity at 77°F	25 - 35 cps	ASTM D 2196 A
Color	Blackish-brown	
Density	9.33 lbs/gal	ASTM D 1475
Flashpoint	288°F	ASTM D 93
Corrosiveness	Non-corrosive	

#### Soil Cat

Appearance	Colorless liquid	
Viscosity at 77°F	5-18 cps	ASTM D 2196
Flashpoint	320°F	ASTM D 93

#### Cured

Density	8.75-9.17 lbs/gal	ASTM D 1475
Tensile Strength	170 psi	ASTM D 190 63
Compressive Strength	1648 psi in sand	Unconfined
Bending strength	369 psi	
Shearing Strength	184 psi	
Bond Strength to Bending bond strength	28 psi	
Mortar Joints Shearing bond strength:	326 psi	
Coefficient of Permeability	$4.98 \times 10^{-6}$	
Toxicity	Non-toxic	

The data shown above reflects typical results based on laboratory testing under controlled conditions. Reasonable variations from the data shown above may result.

### Reactivity

	%HYDRO ACTIVE® Cut Cat	Geltime in min-sec
* at 50°F	0.5%	15' 05"
	1.0%	7' 00"
	1.5%	3' 42"
* at 68°F	0.5%	11' 00"
	1.0%	5' 00"
	1.5%	2' 35"
* at 86°F	0.5%	6' 25"
	1.0%	3' 30"
	1.5%	1' 55"

Example - 1% Soil Cat = 1.3 oz. per gallon of HYDRO ACTIVE® Soil  
**Note: Soil Cat must be agitated by shaking the can prior to adding to resin**

## PACKAGING

### HYDRO ACTIVE® Soil:

- 55 gallon metal drum sealed under dry nitrogen.
- 5 gal metal pail sealed under dry nitrogen.

### HYDRO ACTIVE® Soil Cat Accelerator:

- 25 oz. cans.

## 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 HYDRO ACTIVE Grouts must be in a range of pH 3 –10 for optimum foam quality.**

## SURFACE PREPARATION

Refer to DeNeef Surface Preparation Guidelines for more details.

## INSTALLATION PROCEDURES

Prior to installation both the grout and accelerator must be agitated separately before combining by vigorously shaking or mixing. The grout should never be used with more **HYDRO ACTIVE® Soil Cat** than the amount recommended on this data sheet. Excess acceleration will cause a vigorous expansion that is prone to shrinkage. Pour the desired amount of **HYDRO ACTIVE® Soil** into a clean pail. Measure the appropriate amount of **HYDRO ACTIVE® Soil Cat** and pour it into the **HYDRO ACTIVE® Soil** and stir until adequately mixed. During injection the grout will follow the path of least resistance. When the material has stopped penetrating it will continue to expand against the confines of the crack/joint and compress within itself, forming a very dense, open cell material stopping the leak.

For application procedures in extreme temperatures and specific environments or equipment recommendations call the De Neef Technical Service Department.

## STORAGE & HANDLING

Store in dry area in original Resealable Containers.

**Warning!** If **HYDRO ACTIVE® Soil Cat** is allowed to freeze it will lower performance.

## PRECAUTIONS

Always use protective clothing, gloves and goggles consistent with OSHA regulations during use. Avoid eye and skin contact. Do not ingest. Refer to Material Safety Data Sheet for detailed safety precautions.

## SAFETY INFORMATION

In the event of an EMERGENCY call:  
CHEM-TREC 800-424-9300.

## WARRANTY INFORMATION

De Neef Construction Chemicals, Inc. products are warranted under the policy set forth under the WARRANTY section of the De Neef Construction Chemicals Inc., product catalog. Warranty information can also be obtained via the De Neef Construction Chemicals Inc. website at [www.deneef.com](http://www.deneef.com), or by calling 713-896-0123 or toll free at 1-800-732-0166.

Rev. 07/2006