

CCS™ GROUT I

HYDROPHILIC POLYURETHANE WATER CUT-OFF PREPOLYMER



TECHNICAL DATA SHEET FOR PROFESSIONAL CONTRACTOR USE ONLY

DESCRIPTION

CCS™ Grout I is a single-component, hydrophilic polyurethane liquid prepolymer which reacts freely with water in any proportion to form a foam or gel. Since water is a component of the cured product structure, the material can be affected by wet and dry cycles. The reacted material may shrink and swell as a result of the surrounding moisture content.

FEATURES

- Forms a Flexible Gasket or Plug
- Prevents Water Infiltration

MIXING

Before application, pre-mix CCS™ Grout I. All equipment used to mix the material must be dry to prevent the CCS™ Grout I from reacting.

Since the CCS™ Grout I mixture will only activate when it comes in contact with water, it does not need to be used immediately.

However, the surface may harden which will then need to be removed before the unhardened materials may be used normally.

MIX RATIO

The CCS™ Grout I : Water General Properties

1:1 to 1:3 Tough Elastomeric Foam

1:4 to 1:10 Soft / Weak Gel

CCS™ Grout I can either react to a foam or gel on contact with water based on the mixing ratio. The product forms a flexible get at product to water ratios from 1:4 to 1:10. Less water results in a stronger gel.

Gel time is about 1 to 3 minutes varying with temperature and water saturation. At low product to water ratios of 1:1 to 1:3, CCS™ Grout I reacts to a flexible and closed cell foam under pressure.

INSTALLING

Multi ratio pump : For best results, CCS™ Grout I should be injected with a multi ratio pump at preset product to water ratio to achieve the desired gel consistency and properties.

Single component pump: The product may also be applied with single component injection equipment. The presence of sufficient water in the substrate is necessary for the product to form a gel. It may be advisable to introduce water prior to injection. In areas of very little water content and little counter pressure the product may expand to a foam.

For curtain / bladder injection methods behind below grade structures it is recommended to drill through the structure in a

TECHNICAL

DATA

PHYSICAL PROPERTIES	TEST METHOD	VALUE
Color		Light Brown
Density	ASTM D3574	8.7 lb/gal
Viscosity @ 75°F (25°C)	ASTM D1638-74	Water: Gel 10:1 50 cp Water: Gel 5:1 100 cp
Flash Point	ASTM D93	200°C (93°C)
% Solids	ASTM D1010	80%
Solubility in Water		Gelation
Induction Time @ 68°F (20°C) (approximately)		<30 seconds
Gel Time (approximately)		100 seconds
Corrosiveness		Non Corrosive
Foam		
Ratio (Grout:Water)		1:1
Tensile Strength	ASTM D3574	430 psi
Tensile Elongation	ASTM D3574	462%
Bonding Strength		300-380
Die C		49
Shrinkage	ASTM D1042	<1% - 10%
Gel		
Ratio (Grout:Water)		1:5
Tensile Strength	ASTM D3574	165 psi
Tensile Elongation	ASTM D3574	>1250%
Bonding Strength		120-150
Die C		43
Shrinkage	ASTM D1042	<1% - 10%
Gel		
Ratio (Grout:Water)		1:8
Tensile Strength		150 psi
Tensile Elongation		>1250%
Bonding Strength		120-140
Die C		43
Shrinkage	ASTM D1042	<1% - 10%



pattern that is determined by the physical properties of the soil.

WARNING: This product contains Isocyanates and Solvent.

To create a standard checkerboard pattern, holes are drilled two feet (50 cm) apart from each other in a horizontal line. The next step is to drill holes in a line two feet (50 cm) above the first line in the same fashion but staggered. Begin injection at the highest point. Each packer should be injected until material penetrates the surrounding drill holes. Patterns may vary according to conditions on the jobsite.

All equipment, pumps and hoses must be dry. Avoid moisture contact with the mixture to prevent premature reaction. If product foams while pumping, immediately shut down the machine and flush with a cleaner to avoid built up and clogging of the equipment.

CLEAN UP

Excess mixed product is best removed from the work area and tools before it hardens. The use of rags and solvents such as acetone or heavy-duty detergents facilitates cleaning. Cured product may be removed from tools by soaking in an epoxy stripper.

PACKAGING & COLORS

- Standard package sizes of 5-gallon (18.9 liter) pails.
- Standard color is light brown.

SHELF LIFE

One year minimum in unopened, original containers when stored between 60 and 95°F (15-35°C) in a dry place away from sunlight.

LIMITATIONS

CCS™ Grout I is moisture activated. Keep all equipment dry to avoid any moisture contact with the mixture to prevent premature reaction of the product.

Do not mix more material than the amount that will be pumped within a reasonable time.



Limited Warranty: Please read all information in the General Guidelines, Technical Data Sheets, Guide Specifications and Safety Data Sheets (SDS) before applying material. These products are for professional use only and preferably applied by professionals who have prior experience with ChemCo Systems materials or have undergone training in application of ChemCo Systems materials. Published technical data and instructions are subject to change without notice. Contact your local ChemCo Systems representative or visit our website for current technical data, instructions, and project specific recommendations.

ChemCo Systems warrants its products to be free of manufacturing defects and that they will meet ChemCo Systems' current published physical properties. Seller's and manufacturer's sole responsibility shall be to replace that portion of the product which proves to be defective. There are no other warranties by ChemCo Systems of any nature whatsoever expressed or implied, including any warranty of merchantability or fitness for a particular purpose in connection with this product. ChemCo Systems shall not be liable for damages of any sort, including remote or consequential damages resulting from any claimed breach of any warranty whether expressed or implied. ChemCo Systems shall not be responsible for use of this product in a manner to infringe on any patent held by others. In addition, no warranty or guarantee is being issued with respect to appearance, color, fading, chalking, staining, shrinkage, peeling, normal wear and tear or improper application by the applicator. Damage caused by abuse, neglect and lack of proper maintenance, acts of nature and/or physical movement of the substrate or structural defects are also excluded from the limited warranty. ChemCo Systems reserves the right to conduct performance tests on any material claimed to be defective prior to any repairs by owner, general contractor, or applicator.

Disclaimer: All guidelines, recommendations, statements, and technical data contained herein are based on information and tests we believe to be reliable and correct, but accuracy and completeness of said tests are not guaranteed and are not to be construed as a warranty, either expressed or implied. It is the user's responsibility to satisfy himself, by his own information and test, to determine suitability of the product for his own intended use, application and job situation and user assumes all risk and liability resulting from his use of the product. We do not suggest or guarantee that any hazard listed herein are the only ones which may exist. Neither seller nor manufacturer shall be liable to the buyer or any third person for any injury, loss or damage directly or indirectly resulting from use of, or inability to use, the product. Recommendations or statements, whether in writing or oral, other than those contained herein shall not be binding upon the manufacturer, unless in writing and signed by a corporate officer of the manufacturer. Technical and application information is provided for the purpose of establishing a general profile of the material and proper application procedures. Test performance results were obtained in a controlled environment and ChemCo Systems makes no claim that these tests or any other tests accurately represent all environments. ChemCo Systems is not responsible for typographical errors. © 2021 ChemCo Systems. All rights reserved. Revision 20210323.AG