

CCS™ SuperSEAL™

INJECTION SEAL PASTE - EXTREMELY SHORT WORKING TIME FOR SEALING OF CRACKS PRIOR TO INJECTION

TECHNICAL DATA SHEET FOR PROFESSIONAL CONTRACTOR USE ONLY

DESCRIPTION

CCS™ SuperSEAL™ is a two-component, non-sag, epoxy paste adhesive bonder designed for sealing cracks and delaminations in concrete, masonry, stone, steel, and wood. It is ideally suited for surface sealing in cool and cold substrate and environments. CCS™ SuperSEAL™ bonds to dry and damp substrates and can be applied up to 1/8 inch thick without sag or flow. It contains no VOC's (volatile organic compounds).

- Meets - ACI 548.15-20 Specification for Crack Repair by Epoxy Injection
- Meets - ICRI Guide for Verifying Field performance of Epoxy Injection of Concrete Cracks

FEATURES

CCS™ SuperSEAL™ is fast curing and its excellent handling characteristics makes it a possible application over a wide range of substrate temperatures while minimizing the interval between crack sealing and pressure injection grouting, particularly at low ambient and substrate temperatures. Contrasting component colors provides a visual key to proper proportioning and thorough mixing. The buttery consistency and its cured film hardness enhance the production rates for seal application, injection, and subsequent removal.

TYPICAL USES

- Rapid cure epoxy for crack sealing prior to pressure injection.
- Excellent adhesion under wide ranges of substrate temperatures.
- Convenient 1:1 mix ratio.
- Contains special colorants for contrasting each component color.
- Buttery consistency for easy installation.
- Do not thin with solvents.

PACKAGING & COLORS

Standard package sizes of Part A + Part B are 2 and 10 gallon (7.6 and 37.9 l.) kits. Cartridges available. The standard color of the mixed components is concrete blue-gray. Custom colors are available and may require minimum quantities and/or slightly higher cost.

CHEMICAL RESISTANCE

CCS™ SuperSEAL™ Paste has excellent resistance to a wide range of commonly encountered chemicals including acids and bases, aircraft and automotive fluids, petroleum fuels, cutting oils, etc. It has limited resistance to hydrocarbon solvents. Performance is a function of the specific chemical and concentration, ambient and solution temperatures, exposure times, and housekeeping procedures. For information on specific chemicals and exposure conditions, contact a ChemCo Systems Technical Representative.

TECHNICAL DATA

7 days 73°F (23°C) unless otherwise indicated. Compressive strength of cement mortar 4,500 psi (13.0 MPa).

PHYSICAL PROPERTIES		TEST METHOD	VALUE
Mix Ratio by Volume			1:1 by volume
Mix Ratio by Weight			100:100
Color	Part A Part B Mixed	VISUAL	White Black Concrete Blue-Gray
Weight per Gallon	Part A Part B Mixed	ASTM D1475	11.8 lbs 11.8 lbs 11.8 lbs
Viscosity	Part A Part B Mixed	ASTM D2393	5600 poise 440 poise 300 poise
Non-Sag Thickness		ASTM D2730	1/8 Inch (3.18 mm)
Gel Time, 100 g	40°F (4°C) 73°F (23°C)	ASTM D2471	18 minutes 7 minutes
Compressive Yield Strength		ASTM D695	7,800 psi (53.8 MPa)
Compressive Modulus		ASTM D695	283,500 psi (1,955 MPa)
Bond Pull-Off Strength to Concrete	40°F (4°C) 73°F (23°C)	ASTM C1583	45 psi (0.3 MPa) 75 psi (0.5 MPa)
Heat Deflection Temperature		ASTM D648	110°F (43°C)

LIMITATIONS

- The recommended minimum substrate temperature during installation and for cure is 40°F (4°C).
- The maximum in-service temperature should not exceed 20°F (-7°C) below the HDT (Heat Deflection Temperature) in bonding applications subjected to substantial and sustained shear stresses that may cause creep.
- The curing agent has a faint odor of a mercaptan additive. Mercaptans are used to taint odorless natural gas for easier detection.
- Do not add solvents or otherwise thin this product.

SURFACE PREPARATION

Substrate surfaces must be dry or damp, sound and free of all bond inhibiting substances for sealers used as epoxy dams. Prepare surfaces in accordance with ICRI (International Concrete Repair Institute) Guideline No. 310.2R Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, Polymer Overlays, and Concrete Repair, Concrete Surface Profile, CSP 2 to CSP 4. The concrete surfaces should have a minimum strength of 250 psi (1.72 MPa) in direct tension per ASTM C1583 Standard Test Method for Tensile Strength of Concrete Surfaces and the Bond Strength or Tensile Strength of Concrete Repair and Overlay Materials by Direct Tension (Pull-off Method). Steel surfaces should be cleaned to "white metal" according to SSPC-SP 5/NACE No. 1 White Metal Blast Cleaning is a standard used for white metal blast cleaning put forth by the SSPC (Society for Protective Coatings) and NACE (National Association of Chemical Engineers) international standard.

MIXING

CCS™ SuperSEAL™ is a two-component adhesive. The resin to hardener (Part A : Part B) mix ratio is 1:1, by volume. Premix the individual components before drawing from bulk packaging. Wear safety glasses and clean neoprene rubber gloves when handling the material. Transfer the appropriate quantities of Part A and Part B into a mixing container. Use quantities that can be applied before the pot life of the material expires. Blend thoroughly using a Jiffy mixer blade attached to a low speed (350-750 rpm) electric or pneumatic drill. Proper mixing will take 2-3 minutes.

INSTALLING

For crack sealing applications, trowel a thin layer of material over the crack with a margin trowel, taking care to force material into the crack. Allow for adequate cure of the epoxy seal before beginning pressure injection of epoxy adhesive. For bonding applications, apply material on both surfaces to be bonded in thicknesses sufficient to fill all gaps between the two surfaces. Mate the surfaces and apply pressure until excess adhesive is extruded from the joint. Ideally, the material thickness at the bond line should be 1/32 -1/8 inch. Surfaces must be mated while the adhesive is tacky. Allow for adequate cure of the epoxy adhesive before the bonded section is returned to service.

CLEAN UP

All tools and equipment must be cleaned before the mixed material cures. Cleaning can be facilitated with a solvent such as acetone or heavy-duty detergents. Cured material may be removed from equipment and tools by soaking in an epoxy stripper.

SAFETY

This bulletin does not accompany the product when sold. For hazard warnings, safe handling, and first aid instructions, CAREFULLY READ THE SAFETY DATA SHEETS AND CONTAINER WARNING LABELS.

Part A: Liquid epoxy resin, HMIS Health Hazard Rating- 2 (Moderate Hazard). Warning! Causes eye and skin irritation. May cause an allergic skin reaction. Harmful if swallowed. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Avoid prolonged or repeated contact with skin.

Part B: Liquid epoxy hardener, HMIS Health Hazard Rating- 3 (Serious Hazard). Contains alkaline amines. Danger! Causes severe eye and skin burns. May cause allergic skin and respiratory reactions. Corrosive, do not get in eyes or skin or on clothing. Avoid breathing vapor. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling. Keep away from heat and open flame.

TECHNICAL SUPPORT

Additional information, technical assistance, and management services are also available from a ChemCo Systems Technical Consultant at sales@chemcosystems.com or 650-261-3790.

The properties listed in this bulletin are typical and descriptive of the product and should not be used for specification purposes. For specification preparation, reference the specification of this product available from ChemCo Systems.

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PROJECT NOTES



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.

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