

CCS™ GROUT, CONTROL JOINT

Flexible Epoxy Sealant For Control Joints, Sawcuts, and Detector Loops

CCS Grout, Control Joint is a two - component, fast curing, flexible epoxy for filling control joints, wire slots (as a detector loop sealant) and other saw cuts in concrete and asphalt. The cured product has excellent impact and abrasion resistance and good resistance to deicing chemicals and most automotive and aircraft fluids. Its has low water absorption and high dielectric strength making it ideally suited for embedding wire and traffic detection loops in concrete and asphalt pavements and for filling properly prepared saw cut control joints in interior concrete slabs. Control Joint also may be used for bonding precast concrete curbing to concrete and asphalt substrates. Conforms to ACI 302.1R guidelines for floors and slabs.

Features

- Convenient 1: 1, by vol. mix ratio
- Fast cure for short downtime
- Does not embrittle; stays tough and flexible
- Resists road, auto and aircraft chemicals
- Environmentally safe - No VOC solvents, O g/l
- Tolerates damp substrates unlike other materials
- Higher bond and tensile strengths than polyurethanes and polyesters

Limitations: Substrates must be dry. Minimum installation and cure temperature is 40 °F. NOT AN ELASTOMER - do not use in: joints subject to movement or flexing, expansion joints or exterior joints. Do not add solvents or otherwise thin this material.

Packaging & Colors: Standard package sizes of Part A + Part B are 2, 10 and 100 gallons. Standard color is concrete gray and black; custom colors available.

Shelf Life: Three years minimum in unopened, original containers when stored between 60 and 90 °F in a dry place away from sunlight. Remixing of components may be required upon long-term storage.

Chemical Resistance: CCS Control Joint is resistant to a wide range of commonly used aircraft and automotive chemicals including jet fuels, gasoline, hydraulic fluids, anti-freeze and battery acid. 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, Inc., technical representative.

Surface Preparation: Substrate surfaces must be dry, sound and free of all bond-inhibiting substances. Prepare surfaces in accordance with *ASTM D 4259* or *ACI 503R* and ChemCo Systems' specific recommendations. Cleaned concrete surfaces should have a minimum strength of 250 psi in direct tension. Cleaned asphalt surfaces should have a minimum strength of 100 psi at 73° ± 4 F. in direct tension. Steel surfaces should be cleaned to "white metal" according to SSPC SP 5.

Mixing: CCS Control Joint is a two-component system. The resin to hardener (Part A : Part B) mix ratio is 1:1, by volume. Read all material safety data (MSDS) information before handling the product. Wear safety glasses and rubber gloves when handling the materials. Premix the individual components before drawing from bulk packaging. Transfer appropriate quantities of Part A and Part B into a mixing container. Use quantities that can be applied before the potlife of the mixed 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 filling control joints, wire slots and saw cuts, transfer mixed material to a pour can with a spout sized for the joint to be filled. Fill the joint in a single direction. For a filled surface flush with the surrounding substrate, overfill slightly the joint until a crown of material is formed. For narrow or deep joints, filling in two steps with the bulk of the material placed in the first step allows trapped air and settlement to occur for a more uniform installation. Following initial cure, excess material (high spots) may be removed by warming with a hot air stream (heat gun) and cutting with a sharp blade.

<u>Approximate Yield</u>		
<u>Joint Dimensions, inches</u>		<u>Linear</u>
<u>Width</u>	<u>Depth</u>	<u>Feet/Gallon</u>
1/2	1/4	154
1/2	3/8	102
3/4	3/8	68
3/4	1/2	51
1	3/4	25

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

TYPICAL PROPERTIES ⁽¹⁾

Property ⁽²⁾	Test Method	Value
Mix Ratio, A:B,	by vol	1 : 1
	by wt	100: 79
Color:	Part A	Concrete gray or black
	Part B	Clear amber
	Mixed	Concrete gray or black
Weight per Gallon, lb:	Part A	9.8
	Part B	7.8
	Mixed	8.8
Viscosity, cp	Part A	4100
	Part B	4400
	Mixed	4300
Gel Time, 200 g, minutes	ASTM D 2471	15
Tensile Strength, psi	ASTM D 638	1200 (3)
Elongation at Break, %	ASTM D 638	90 (3)
Tear Resistance, lbf/in	ASTM D 624	110 (3)
Taber Abraser, mg loss	ASTM D 4060	120 (4)
Shore Hardness	D Scale	60
	A Scale	92

(1) The properties listed are typical and descriptive of the product and should not be used for specification purposes. For specification preparation, reference the ChemCo Systems, Inc., product guideline specification.

(2) Cure schedule, 7 days at 73° ± 4 F and test temperature, 73° ± 4 F.

(3) Tested at crosshead speed of 2.0 inches/minute.

(4) CS-17 wheels, 1000 g load, 1000 cycles.

Handling and Toxicity: This bulletin does not accompany the product when sold. For hazard warnings, safe handling and first aid instructions, CAREFULLY READ THE MATERIAL 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 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 - 2 (Moderate Hazard). Contains alkaline amines. Warning! Causes eye and skin irritation. May cause allergic skin and respiratory reaction. Combustible, 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.

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