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CCS™ GROUT, CONTROL JOINT - HB

FLEXIBLE EPOXY GROUT FOR CONTROL JOINTS AND SAW CUTS

CCS Grout, Control Joint - HB (High Build) is a two component, fast curing, flexible, epoxy grout with used for filling control joints, wire slots and other saw cuts in concrete and asphalt and for bonding precast curbing to concrete and asphalt substrates. The cured product has excellent impact and abrasion resistance and is resistant to deicing chemicals and most automotive and aircraft fluids. Its low water absorption and high dielectric strength make 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 concrete slabs. It is available in two colors, concrete gray (standard) and black. CCS Grout, Control Joint HB meets the provisions of **FAA Item P-606** (adhesive compounds, two-component) for airport runway and taxiway lighting for installation into wiring slots and light can annular space embedments in both asphalt and concrete pavement.

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
Meets provisions of FAA Specification P-606

LIMITATIONS: Substrates must be dry. Minimum installation temperature is 40 °F. As a bonder, use only for non-structural applications. NOT AN ELASTOMER - Do not use in joints subject to movement or flexing, i.e., expansion joints. Do not add solvents or thin this material.

PACKAGING & COLORS: Standard package sizes of Part A + Part B are 10 and 100 gallons. Color is concrete gray (standard) and by request, black or custom colors are 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: Control Joint - HB 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*, "Standard Practice for Abrading Concrete," or *ACI 503R, Chapter 5*, "Preparing Surfaces for Epoxy Compound Application," and ChemCo Systems, Inc.'s 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°F in direct tension. Steel surfaces should be cleaned to "white metal" according to SSPC SP 5.

Mixing: Control Joint - HB is a two-component system. The resin to hardener (Part A: Part B) mix ratio is 1:1, by volume. Read material safety data (MSDS) information before handling the product. Wear safety glasses, rubber gloves and protective garments 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. Mix and use quantities that can be applied before the pot life 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. Pot life will be shorter when the ambient temperature is hotter than 73°F.

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. 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. For large installations, use a positive displacement metering pump. In cold climates or when fast cure times are needed, A and B components can be pre-warmed to 100-150°F, which can accelerate cure time to less than one hour.

YIELD AS JOINT FILLER/LOOP SEALANT:

The following material estimates do not take into consideration material lost in mixing and application or excess material for overfilling the joint or slot.

JOINT DIMENSIONS, INCHES		APPROX. COVERAGE
Width	**Depth**	**Lineal feet/gallon**
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: 86
COLOR:	PART A	VISUAL	CONCRETE GRAY OR BLACK
	PART B		CLEAR AMBER
	MIXED		CONCRETE GRAY OR BLACK
WEIGHT PER GALLON, LB:	PART A	ASTM D 1475	11.4
	PART B		9.8
	MIXED		10.7
VISCOSITY, P:	PART A	ASTM D 2393	210
	PART B		180
	MIXED		190
GEL TIME, MINUTES:	1 QUART	ASTM D 2471	20
	1 GALLON		15
THIN FILM CURE TIME,	HOURS:	ASTM D 1640	
	TACK-FREE		4
	HARD DRY		6
TENSILE STRENGTH, PSI		ASTM D 638	1500 (3)
ELONGATION AT BREAK, %		ASTM D 638	60
HARDNESS, SHORE D		ASTM D 2240	62

(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.

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.

DISCLAIMER: NO EXPRESS WARRANTY IS MADE WITH RESPECT TO THE RESULTS OF ANY USE OF THIS PRODUCT. NO IMPLIED WARRANTIES, INCLUDING AND NOT LIMITED TO AN IMPLIED WARRANTY OF MERCHANTABILITY OR AN IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE ARE MADE WITH RESPECT TO THIS PRODUCT. NO LIABILITIES FOR PERSONAL INJURY, LOSS OR DAMAGE RESULTING FROM THE USE OF THIS PRODUCT IS ASSUMED. CHEMCO SYSTEMS, INC., RESERVES THE RIGHT TO ALTER OR DISCONTINUE THE PRODUCT DESCRIBED HEREIN AT ANY TIME AND WITHOUT PRIOR NOTICE.

CCS™ is a trade name of ChemCo Systems, Inc.

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