

## CCS™ COATING MVR PRIMER

### FOR SLAB ON GRADE CONCRETE WITH HIGH MOISTURE VAPOR TRANSMISSION

CCS MVR Primer is a versatile high performance two component, solvent free, epoxy designed for prime coating dry and damp slab on grade concrete floors where moisture vapor transmission rates exceed 3 lbs./1000 ft.<sup>2</sup> over a 24 hr. period as measured by ASTM F1869. Typical applications include preparing for the installation of impervious floor coatings and coverings both above and below grade. MVR Primer reduces excessive moisture vapor transmission rates of up to 15 lbs./1000 ft.<sup>2</sup> over a 24 hr. period to below 3 lbs. to meet the requirements of impervious flooring manufacturers. The product's cure cycle, tolerance of surface dampness, high bond strengths, low viscosity and excellent penetration make it ideally suited as a primer. MVR Primer significantly improves the bond strength of the topcoat or surfacing to the substrate. The product has a convenient 2:1 mix ratio and does not contain volatile solvents (VOC's). Determination of the bond strength of MVR Primer + topcoat to the prepared substrate, particularly under low temperature, damp conditions prior to installation is recommended.

#### FEATURES

- Convenient 2: 1, by vol. mix ratio
- Fast cure for short downtime
- Bonds to dry, damp and wet substrates
- Works at temperatures down to 50 °F
- Resists road, auto and aircraft chemicals
- Environmentally safe - No VOC solvents
- Not regulated as corrosive by DOT

**LIMITATIONS:** Primer coat of MVR Primer must be allowed to cure to a set but slightly tacky condition before application of the desired top coat. Substrate surfaces may be dry or slightly damp. The minimum substrate temperature for cure is 50 °F. Apply the material after the daily substrate temperature cycle has reached its peak. MVR Primer should be applied no sooner than 10 days after slab placement. A test evaluation is strongly suggested to ensure that a third party coating or adhesive bond strength is demonstrated. MVR Primer is not a substitute for a properly designed and placed vapor barrier (below slab membrane).

**PACKAGING & COLORS:** Standard package sizes of Part A + Part B are 3 and 15 gallons. Color is clear amber.

**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 prolonged storage.

**CHEMICAL RESISTANCE:** Resistant to a wide range of commonly used deicing chemicals and aircraft and automotive fluids. 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, Inc., technical representative.

**SURFACE PREPARATION:** Concrete surfaces must be sound and free of all bond-inhibiting substances. Wet surfaces must be dried to no surface film of water prior to application of MVR

Primer. If surface drying of wet substrates is not practical, use hand pressure or multi-directional scrubbing action to ensure all water is displaced between substrate and epoxy for optimum bonding. Prepare surfaces for bonding in accordance with *ASTM D 4259* or *ACI 503R* and ChemCo Systems' specific recommendations. Properly prepared concrete surfaces should have a minimum strength of 250 psi in direct tension. Steel surfaces should be cleaned to white metal according to SSPC SP 5.

**MIXING:** MVR Primer is a two-component adhesive. The resin to hardener (Part A: Part B) mix ratio is 2:1, by volume. Read Material Safety Data Sheet (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 the appropriate quantities of Part A and Part B into a mixing container. Mix 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. Pour the mixed primer onto the substrate or into a shallow tray (extends working life by reducing the build-up of exothermic heat). Take care to mix only the material that can be used within the gel time. In hot ambient temperatures, keep the product components in air-conditioned or cooled storage for maximum useful mixed life.

**INSTALLING:** Prime the substrate with mixed MVR Primer using a 3/32" notched squeegee followed by back-rolling using a 3/8" nap roller. The recommended primer thickness is 15 mils (95-120 ft.<sup>2</sup>/gal) depending upon surface porosity. Apply the top coat or flooring adhesive to the primed substrate after the primer is set but still tacky not sooner than 10-12 hours after primer application. Clean application tools frequently. For primer cure times exceeding 24 hours, lightly top seeding the primer coat with 30-40 mesh kiln dried aggregate at a rate of 2 lb/ yd.<sup>2</sup> is recommended to improve bonding of the subsequent coating or adhesive.

**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 <sup>(1)</sup>

PROPERTY <sup>(2)</sup>		TEST METHOD	VALUE		
Mix Ratio, A:B,	by vol		2 : 1		
MIX RATIO, A:B,	BY VOL		2 : 1		
	BY WT		100:60		
COLOR:	PART A	VISUAL	CLEAR AMBER		
	PART B		AMBER TO SLIGHT BRN		
	MIXED		CLEAR AMBER		
WEIGHT PER GALLON, LB:	PART A	ASTM D 1475	9.5		
	PART B		8.7		
	MIXED		9.2		
VISCOSITY, CP:	PART A	ASTM D 2393	700		
	PART B		800 - 1000		
	MIXED		750		
GEL TIME, 250 G, MINUTES		ASTM D 2471	45		
PRIMER SET TIME, MINIMUM, HOURS (2)		ASTM D 4541	<b>@50° F</b>	<b>73° F</b>	<b>90° F</b>
			12	10	8
COMPRESSIVE STRENGTH, PSI		ASTM D695	12600		
TENSILE STRENGTH, PSI		ASTM D 638	6200		
ELONGATION AT BREAK, %		ASTM D 638	3		
ALKALI RESISTANCE		ASTM D1308	PASSES		
MICROBIAL RESISTANCE		ASTM G21	1 RATING		
PERMEABILITY, INCH-LB. (THIN FILM)		ASTM E96	0.2 (DRY)		
			0.8 (WET)		

(1) CURE SCHEDULE, 7 CLAYS AT 73° ± 4° F AND TEST TEMPERATURE, 73° ± 4° F.

(2) MINIMUM PRIMER SET TIME BEFORE APPLICATION OF IMPERVIOUS COATINGS OR FLOORING ADHESIVES.

**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. Danger! Causes severe eye and skin burns. 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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