

## CCS™ COATING, HIGH TEMP

### High HDT Epoxy Coating for Strong Industrial Chemicals

CCS Coating, High Chemical Resistance is a two-component, rigid, epoxy coating with excellent resistance to strong acids and bases, organic acids in moderate concentrations, industrial chemicals and aircraft and automotive fluids (fuels, lubricants, hydraulic fluids). The product has an extremely high heat deflection temperature (which can be improved through post-curing) that maintains the hardness and chemical resistance of the product when in contact with hot liquids. CCS Coating, High Temp will bond to dry and damp substrates and cures to a tough, blush-free, tile-like surface. In outdoor use, the coating is freeze/thaw resistant and will not embrittle. This product requires no primer. The standard color is concrete gray (beige/gray).

#### Features

- Convenient 2 : 1, by vol. mix ratio
- Fast cure for short downtime
- Cures to a tough, blush-free, tile-like surface
- Bonds to dry and damp substrates
- Extremely high HDT for high temp environments
- Does not embrittle when exposed to direct sunlight
- Resistant to most strong industrial chemicals
- Environmentally safe - No VOC solvents

**Limitations:** Do not apply on wet substrates. Minimum installation and cure temperature is 50 °F. Apply after daily substrate temperature has peaked. Substrates on or below grade must have a functioning vapor barrier to minimize the potential for blistering or delaminating of the applied coating which is a vapor barrier. Do not add solvents or otherwise thin this material.

**Packaging & Colors:** Standard package sizes of Part A & Part B are 3 and 15 gallons. Standard color is concrete gray (beige-gray); brick red (special order).

**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 is required after long-term storage.

**Chemical Resistance:** CCS Coating, High Temp provides excellent resistance to water, detergent and salt solutions, alcoholic and carbonated beverages, gasoline, kerosene, crude, fuel and mineral oil, strong alkali and inorganic acids in concentrations up to 25% and to most organic acids. Exposure to organic acids, strong acids and alkali in higher concentrations, bleaches and other highly corrosive chemicals should be occasional and time limited. Resistance under these conditions should be determined by actual test before the product is applied. CCS Coating, High Temp 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 may be dry or damp (not wet) though dry substrates are preferred and must be 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. Steel surfaces should be cleaned to white metal according to SSPC SP 5. Galvanized steel and aluminum require special surface preparation.

**Mixing:** CCS Coating, High Temp is a two-component system. The resin to hardener (Part A: Part B) mix ratio is 2 : 1, by volume. Read material safety data (MSDS) information before handling the product. Wear safety glasses and rubber gloves when handling the materials. Premix the individual components before use. Transfer appropriate quantities of Part A and Part B into a mixing container. 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.

**Installing:** The recommended applied thickness for floor and wall coatings is 2-3 coats minimum at 10 mils per coat (3 coats for best chemical resistance in immersion use for a total of 30-40 mils). Apply in multiple thin coats rather than one thick coat using a stiff bristle brush, short nap roller, squeegee or two component spray equipment. Subsequent coats may be applied as soon as the previous coat is touch dry (6 - 7 hr @ 70° F). Avoid excessive cure times between coats. The recommended applied thickness for floor surfacings is 20 - 30 mils per coat. Pour mixed material onto the substrate and spread to the desired coverage with a V-notch trowel or squeegee. Aggregate, if used, must be broadcast onto the coating within 15 minutes of application. The recommended aggregate size is #20 x 0 or #30 x 50 mesh. Typical aggregate broadcast rates are .75 - 1.50-lb/sq ft.

| <b>Approximate Yield</b>      |                           |
|-------------------------------|---------------------------|
| <u>Coating Thickness, mil</u> | <u>Square feet/gallon</u> |
| 15                            | 105                       |
| 20                            | 80                        |
| 25                            | 64                        |
| 30                            | 53                        |

**TYPICAL PROPERTIES (1)**

| Property (2)                     |                               | Test Method | Value   |
|----------------------------------|-------------------------------|-------------|---|
| Mix Ratio, A:B,                  | by vol<br>by wt               |             | 2: 1<br>100: 33.4   |
| Color:                           | Part A<br>Part B<br>Mixed     | VISUAL      | Concrete beige-gray<br>Clear amber<br>Concrete beige-gray |
| Weight per Gallon, lb:           | Part A<br>Part B<br>Mixed     | ASTM D 1475 | 12.1<br>8.15<br>10.8                                      |
| Viscosity, p:                    | Part A<br>Part B<br>Mixed     | ASTM D 2393 | 53.5<br>1.8<br>36   |
| Gel Time, 200 g, minutes         |                               | ASTM D 2471 | 20  |
| Recoat Time, hours               | @ 60° F<br>@ 73° F<br>@ 90° F | CHEMCO      | 8 - 72<br>4 - 24<br>2 - 10                                |
| Tensile Strength, psi            |                               | ASTM D 638  | 6200  |
| Elongation at Break, %           |                               | ASTM D 638  | 1.0   |
| Compressive Yield Strength, psi  |                               | ASTM D 695  | 11,000  |
| Compressive Modulus, psi         |                               | ASTM D 695  | 400,000   |
| Heat Deflection Temperature, ° F |                               | ASTM D G48  | 145, 180 (3)  |
| Hardness, Shore D                |                               | ASTM D 2240 | 83  |

(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 unless otherwise indicated.

(3) Post-cure at 150 ° F for 24 hr.

**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.

**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 - 3 (Serious 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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