

Blome CP-83UHT Ultra High Temperature Epoxy Adhesive

PRODUCT DESCRIPTION

Blome CP-83UHT is a two-part, high temperature, epoxy adhesive used for the installation of abrasion resistant brick and tile linings in high temperature applications. Blome CP-83UHT is especially suited for use in high temperature lining applications requiring good bond strength and physical properties at higher operating temperatures (450°F - 550°F). Blome CP-83UHT is well suited for bonding alumina ceramic, basalt and AZS tile in lining applications requiring resistance to abrasion and erosion, as well as acids, bleaches, alkalis, solvents and other corrosive chemicals. The material is also well suited for use as a concrete repair putty for filling form voids, crack repair and other concrete applications.

TYPICAL USES

Blome CP-83UHT is suitable for bonding brick, tile and concrete in a variety of high temperature lining applications including:

- Chutes, Hoppers and Troughs
- Slurry Pipe Linings
- Pulverizers, Ball Mills and Classifier Cones
- Concrete Crack Repair and Form Void Filling

HANDLING CHARACTERISTICS

CP-83UHT offers excellent trowelling and handling characteristics, with sufficient body and thixotropy to butter brick in place and secure them from slipping or sliding while the mortar cures. CP-83UHT cures rapidly and provides an excellent bond to brick and tile. This unique formulation produces excellent results while installing brick in horizontal, vertical and even overhead areas.

TYPICAL PROPERTIES WET

Components:	Two (2) - Resin & Hardener
Wet mortar density:	11 lbs. per gallon
Mixed consistency:	Creamy mortar
Pot life:	50°F 30 - 40 minutes 77°F 20 minutes
Initial set:	50°F 2 - 4 hours 77°F 1 - 2 hours
Final cure	50°F 7 days minimum 77°F 5 days minimum
Mix ratio (by volume)*	3:1 Resin:Hardener*

*To ensure proper mix ratio, we recommend mixing full units

CURED*

Temperature Resistance	450°F (excursions to 550°F)*
Absorption (ASTM C-413)	0.2%
Bond Strength to concrete	Concrete failure
Bond Strength to Steel (pull test Positester AT)	2,600 - 3,000 psi
Color	Light Gray
Compressive Strength (ASTM C-579)	10,680 psi
Tensile Strength (ASTM C-307)	2,800 - 3,200 psi
Coefficient of Thermal Expansion (ASTM C-531)	12 - 14 x 10 ⁻⁶ in/in/°F

*Full properties are achieved once initially cured material is exposed to 250 °F for several hours.

PACKAGING & STORAGE

Blome CP-83UHT is supplied as a two (2)-component product, with pre-measured Resin and Hardener components. CP-83UHT Resin (Part A) is packaged in short filled, one-gallon cans, CP-83UHT Hardener (Part B) is packaged in short filled, one-quart cans.

Unit Size	One (1) gallon
Resin	One (1) short filled gallon can
Hardener	One (1) short filled quart can

Shelf life for CP-83UHT components is one (1) year. Keep Blome CP-83UHT components tightly sealed in original containers until ready for use. Store components in a cool, dry place, out of direct sunlight, and on pallets at temperatures between 50°F – 80°F.

ESTIMATED COVERAGE

A one-gallon unit of CP-83UHT covers approximately 7 ft² of tile lining when used as a setting bed for tile with a nominal 1/16" joint thickness between the tile. This is an estimated coverage rate and does not allow for waste, bed or side joint variations, or other job site contingencies.

BID SPECIFICATION GUIDE

Use Blome CP-83UHT Ultra High Temperature Epoxy Adhesive as supplied by Blome International, O'Fallon, MO.

JOB SITE ENVIRONMENTAL CONDITIONS

Blome CP-83UHT is best applied while ambient temperatures are between 50°F and 90°F. Blome CP-83UHT components, brick, tile and substrate temperatures must also be maintained in this range. Installations of CP-83UHT should be protected from water and weather during installation and curing.

SURFACE PREPARATION

Steel substrates should be prepared by abrasive blasting or grinding to achieve near white metal clean to SSPC SP-10. Steel should exhibit a nominal 2-4 mil anchor profile. Blasted steel substrates must not be allowed to flash rust prior to installing epoxy adhesive. Concrete substrates to which Blome CP-83UHT will be applied must have a minimum 28 day cure or have a minimum compressive strength of 3,000 psi. Minimum tensile strength of concrete must be 300 psi when tested using a Schmidt Hammer. Concrete must be dry in accordance with ASTM-4263 Plastic Sheet Test Method. Concrete surfaces must be free of all laitance, previously applied coatings or curing compounds, oil, and any dust or other loose materials prior to installation of CP-83UHT bed joint.

Brick and tile to be installed with Blome CP-83UHT must be clean, dry and oil free. If brick or tile has been frozen, they must be thawed completely and allowed to dry prior to installation with Blome CP-83UHT. Liquid or Sheet applied membrane surfaces should be clean and dry prior to installation of Blome CP-83UHT bed joint. These surfaces should be swept clean and be free of dirt, dust, water, or other jobsite contaminants.

SAFETY PRECAUTIONS

Blome CP-83UHT Resin, Hardener, and mixes of them present various health hazards. Consult safety data sheets before handling. Avoid contact with skin and eyes. Wash thoroughly after handling and before eating, drinking, smoking or other activities.

APPLICATION EQUIPMENT

Blome CP-83UHT is best mixed with a trowel or mixing stick. It may also be mixed with a KOL, pail type mixer or in a pail using a drill motor driven paddle blade. This mixing equipment must be clean, dry and free of any contaminants including Portland Cement, other mortars or resins. When mixed, CP-83UHT is applied to brick and substrate with a pointing or margin trowel.

MIXING AND APPLICATION

CP-83UHT is supplied in pre-measured one gallon units. Mix together the entire contents of both Resin and Hardener containers for 1-2 minutes. The components have slightly contrasting colors; mix these two parts until a uniform color is achieved. Mix components for a minimum of 1-2 minutes, making sure there are no stripes or inconsistencies.

Place brick or tile in wet adhesive mortar in accordance with project specification. When laying brick, use a clean, dry pointing or margin trowel, butter brick or tile evenly on 4 or 5 sides. Slide buttered brick or tile into place, squeezing excess mortar from joints. Strike off excess mortar & remove. Joint thickness should be nominally 1/16".

CLEANUP

All tools, mixing equipment, gloves and application equipment should be cleaned up immediately using a detergent or citrus or biodegradable cleanser, with hot water, while material is still wet. If material begins to cure, solvent-based cleaners will be required for removal.

WARRANTY

We warrant that our goods will conform to the description contained in the order and that we have good title to all goods sold. Our material data sheets and other literature are to be considered accurate and reliable, but are used as guides only. WE GIVE NO WARRANTY OR GUARANTEE, WHETHER OF MERCHANT ABILITY OR FITNESS OF PURPOSE OR OTHERWISE, AND WE ASSUME NO LIABILITY IN CONNECTION THEREWITH. We are happy to give suggestions for applications; however, the user assumes all risks and liabilities in connection therewith regardless of any suggestion, we may give. We assume no liability for consequential or incidental damages. Our liability, in law and equity, shall be expressly limited to the replacement of non-conforming goods at our factory, or at our sole option, to repayment of the purchase price of the non-conforming goods.

Printed: June 20, 2020