BC Mortar 1000 LV

ASTM C881Compliant , High modulus adhesive

Description

BC Mortar 1000 LV is a two-component, 100% solids, moisture insensitive, high strength epoxy adhesive and binder for numerous applications. This high modulus, medium viscosity epoxy resin is the perfect solution for bonding new, plastic concrete to existing concrete slabs and steel.

Product characteristics

Features/benefits

Provides exceptional adhesion
Easy to use 1:1 mix ratio
Moisture insensitive

Primary Applications

Bonding fresh concrete to hardened concrete
Anchoring bolts, dowels, or pins
General adhesive for concrete and masonry
Mix with dried silica sand to create a repair mortar

Appearance

Part A liquid is gray in color and Part B liquid is amber in color.

Technical Information

Test Method	Test Property	Result
ASTM D2556	Mixed Viscosity	4,400 cp
ASTM C881	Gel Time	35 minutes

ASTM C882	Bond Strength	2 days: 2,300 psi (15.9 MPa) 14 days: 2,590 psi (17.8 MPa)
ASTM D570	Water Absorption	24 hours: 0.2%
ASTM D648	Heat Deflection Temperature	120 °F (50 °C)
ASTM D2566	Linear Coefficient of Shrinkage	0.002
ASTM D695	Compressive Yield	7 days: 12,500 psi (86.2 MPa)
ASTM D695	Compressive Modulus	7 days: 625,000 psi (4,309 MPa)
ASTM D638	Tensile Strength	7 days: 7,500 psi (51.7 MPa)
ASTM D638	Elongation at Break	1.2%

Directions for use

Surface Preparation: The surface must be structurally sound, dry, clean and free of grease, oil, curing compounds, soil, dust and other contaminants. Surface laitance must be removed.

Concrete surfaces must be roughened and made absorptive, preferably by mechanical means, and then thoroughly cleaned of all dust and debris.

If the surface was prepared by chemical means (acid etching), a water/baking soda or water/ammonia mixture, followed by a clean water rinse, must be used for cleaning, in order to neutralize the substrate.

Allow substrate to dry before application.

 Route cracks and blow dust/ debris from them with oil-free compressed air.

When coating steel, all contamination should be removed and the steel surface prepared to a "near white" finish (SSPC SP10) using clean, dry blasting media.

Mixing:

Mix BC Mortar 1000 LV using a low-speed drill and a mixing paddle.

Pre-mix Part A and Part B separately for approximately 1 minute each.

Combine Part A and Part B in a 1:1 ratio by volume, then mix thoroughly for 3 to 5 minutes.

To make BC Mortar 1000 LV , gradually add clean, dry, 20/40 mesh silica sand to previously mixed BC Mortar 1000 LV epoxy and mix thoroughly for 3 to 5 minutes. The mix ratio of aggregate to mixed epoxy is approximately 3:1 by volume, but can be modified depending on the desired consistency of the mortar.

Scrape the bottom and sides of the containers at least once during mixing. Do not scrape bottom or sides of the container once mixing operations have ceased; doing so may result in unmixed resin or hardener being applied to the substrate.

Unmixed resin or hardener will not cure properly. Do not aerate the material during mixing.

Application:

Bonding fresh concrete to hardened concrete: Apply by brush, roller, squeegee, or spray to the prepared, existing concrete substrate.

Place fresh concrete onto the BC Mortar 1000 LV while it is still tacky.

The open time is typically 3 to 4 hours at 75 °F (24 °C). The open time is reduced at warmer temperatures.

Anchoring bolts, dowels, pins:

BC Mortar 1000 LV can be used neat or as a mortar to grout vertically-aligned anchors (into a horizontal substrate). The anchor hole should be free of all debris before grouting. The optimum hole size is 1/16" (1.6 mm) annular space (1/8" (3.2 mm) larger diameter than anchor diameter). Depth of embedment is typically 10 to

15 times anchor diameter. Patching and repairs: Apply BC Mortar 1000 LV neat as a primer coat to the prepared concrete surface. Mix the BC Mortar 1000 LV into an epoxy mortar and apply to the area by trowel or spatula in lifts of 1" to 1-1/2" (25 mm to 38 mm) before the neat primer coat becomes tack free. Allow each lift to reach initial set before applying subsequent lifts.