



METCO VLT EPOXY

*Very Low Temperature,
100% Solids, Epoxy Bonding Agent*

1. Product Description

a. **Basic Use:** Metco VLT Epoxy is a very low temperature, rapid setting, 2-component, 100% solids, moisture insensitive, high modulus epoxy bonding agent formulated to bond steel and other ferrous materials to old concrete and old concrete to old concrete. It is designed to meet the requirements of ASTM C 881 specifications.

b. Features/Benefits:

- Rapid cure time allows for high early strengths.
- Specially formulated for use in very cold weather at temperatures down to 20°F (-7°C).
- Contains no volatile solvents permitting interior application with virtually no fire hazard or toxic odors.
- Excellent adhesive properties permit application to most sound surfaces with incredible adhesion including concrete and metal.
- Easily mixed in 2 to 1 ratios by volume.
- Gel consistency permits use in vertical and overhead applications as well as sealing cracks and around epoxy injection ports.
- Moisture insensitive system permits use over damp concrete surfaces.
- 100% solids epoxy system conforms to VOC regulations.
- Versatile formulation allows for use with silica aggregate as a repair mortar.

c. **Typical Applications:** Grouting of dowels, anchor bolts and reinforcing steel, bonding steel to old concrete, old concrete to old concrete, vertical and overhead repairs, repair of cracks and sealing around epoxy injection ports.

d. **Limitations:** Metco VLT Epoxy should not be used as a structural adhesive when temperatures are above 170°F (60°C). Do not use as a coating or primer. Do not apply when ambient and substrate temperatures are less than 25°F (-4°C) without first warming the unmixed epoxy. For applications below 25°F (-4°C), store Metco VLT Epoxy in a heated area.

e. **Composition:** Metco VLT Epoxy is a 2-component, 100% solids, moisture insensitive, high modulus epoxy.

f. **Color/Appearance:** Metco VLT Epoxy is concrete gray after mixing.

2. Packaging

Metco VLT Epoxy is supplied in three standard bulk units (as shown below) and 1/10 gallon (380 ml) pre-packaged cartridges containing the proper proportions of liquid components. Standard bulk packaging information is shown below:

Unit Size	Binder	Activator	Shipping Wt.
1 gal. (3.8 liter)	2/3 gal. (2.5 liter)	1/3 gal. (1.3 liter)	10 lbs. (4.5 Kg)
3 gal. (11.4 liter)	2 gal. (7.6 liter)	1 gal. (3.8 liter)	30 lbs. (13.6 Kg)
15 gal. (56.8 liter)	10 gal. (37.9 liter)	5 gal. (19.4 liter)	150 lbs. (68.0 kg)

3. Estimating/Coverage

One 3 gallon unit of Metco VLT Epoxy will yield the following:

<i>Estimating Chart</i>			
Bolt Size	Hole Size	Hole Depth	Grouted Bolts/Unit
1/2" (12.7 mm)	1" (25 mm)	8" (200 mm)	37 bolts
3/4" (19.0 mm)	1-1/4" (32 mm)	12" (300 mm)	18 bolts
1" (25.4 mm)	1-1/2" (38 mm)	18" (450 mm)	10 bolts
1-1/2" (38.1 mm)	2" (50 mm)	24" (600 mm)	5 bolts

4. Technical Data

a. **Applicable Standards:** Metco VLT Epoxy conforms to the requirements of ASTM C 881 Types I, II, and IV, Grades 3, Class B and C.

b. **Compressive Strength:** ASTM C 109, psi (MPa).

Age	Metco VLT Epoxy
1 day	10,500 (79.3)
2 days	12,500 (86.2)
3 days	14,000 (96.6)
7 days	14,200 (97.9)

c. **Bond Strength:** ASTM C 882 at 7 days psi (MPa).

Metco VLT Epoxy
2000 (13.8) psi (MPa)

5. Directions for Use

a. **Preparation:** The surface to be coated with Metco VLT Epoxy must be physically and structurally sound, thoroughly clean, free of oil, curing compounds or other deleterious materials that may prevent adhesion. New concrete must be thoroughly cured for at least 28 days

before starting surface preparation. All loose particles must be removed by vacuuming or flushing with compressed air and water.

b. Mixing: Thorough blending of all components is essential. Prepackaged cartridges are equipped with a baffled mixing nozzle. Mixing is accomplished as the individual epoxy components are discharged from the cartridge through the baffled nozzle. For bulk applications, use a power drill with a Metco Jiffy mixing paddle. First, mix the binder separately; then, mix the activator separately. Next, add the mixed activator to the mixed binder and thoroughly mix at revolution speeds that will not entrap air bubbles into the freshly mixed Metco VLT Epoxy bonding agent. **Note:** Mixing must be accomplished very quickly and thoroughly before the mixed epoxy hardens.

c. Dowel and Anchor Bolt Grouting: Place Metco VLT Epoxy into a clean and dry hole and then insert dowel, rebar or anchor bolt to proper embedment depth. Twist or rotate dowel, rebar or anchor bolt to insure complete coverage and consolidation.

d. Overhead/Vertical Repairs: Mix clean and dry silica aggregate with Metco VLT Epoxy to a mortar consistency and place onto properly prepared surface. Finish to desired thickness and texture. For very thin applications, place neat epoxy gel without aggregate.

e. Horizontal Repairs: Mix clean and dry silica aggregate with Metco VLT Epoxy to a mortar consistency and place onto properly prepared surface. Finish to desired thickness and texture. For very thin applications, place neat epoxy compound without aggregate.

f. Bonding: After surface preparation is completed, use Metco VLT Epoxy to bond old concrete to existing concrete. Apply with squeegee, roller or trowel. Place hardened concrete pieces together before bond coat hardens.

g. Clean-Up: DL Solvent may be used for cleaning tools and equipment.

h. Working Time/Pot Life: All mixed epoxy compounds should be applied immediately after mixing. Properties after mixing at 72°F (22°C).

<i>Gel Time</i>	<i>2-3 minutes</i>
<i>Initial Set</i>	<i>30 minutes</i>
<i>Final cure</i>	<i>10 hours</i>

6. Availability

Metco VLT Epoxy is normally available immediately from your local distributor or it will be shipped within 5 working days upon receipt of order. Please contact your local Metalcrete representative or call Metalcrete directly for more information.

7. Warranty

Metco VLT Epoxy is manufactured in strict accordance with the quality control standards of Metalcrete Industries. It is guaranteed to perform as indicated on this data sheet when applied by competent applicators.

8. Technical Service

Metalcrete technical service representatives are available to provide on-site assistance with a minimum three day notice.



Metalcrete Industries

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