Concrete Admixtures and Fiber

IMIPOXY LV-50

High Modulus, Low Viscosity Epoxy Bonding Adhesive

DESCRIPTION

IMIPOXY LV-50 is a two component, 50% solids, high modulus, moisture tolerant structural epoxy bonding adhesive that meets the requirements of ASTM C-881.

USE

IMIPOXY MV-50 primary use is bonding fresh concrete to hardened concrete, and for bonding steel to fresh concrete. IMIPOXY LV-50 has excellent adhrsion to most construction materials. IMIPOXY LV-50 may also be used for the anchoring of bolts,dowels and reinforcing steel in concrete.

ADVANTAGES

- High-strength structural adhesion meeting ASTM C-881 requirements
- Ideal for bonding fresh to hardened concrete
- Secondary use for anchoring bolts, dowels, and reinforcing steel
- Moisture tolerant
- Excellent adhesion to most materials
- Ideal for pressure injention and gravity filling of concrete cracks

TECHNICAL INFORMATION

Applicable Standards: ASTM C-881, Type I,II,IV and V, Grade 1, Classes B & C

Application

Surface Preparation: Surfaces to be bonded must be clean and structurally sound. Remove all oil, grease, dirt, laitance, curing compounds and any other foreign material that may cause a problem with the bond. Abrasive blast cleaning and mechanical removal methods are recommended. All drilled holes must be cleaned out with a cylindrical bristle brush removing all dust and loose material. Use clean, oil free compressed air to blow out any remaining dust or debris prior to installation.

Mixing Instructions: Air, material and surface temperatures must be a minimum of 40°F(4°C) prior to mixing or installation. Premix each component separately, then mix 2 parts of Part A with 1 Part B for three minutes with a low speed drill motor using a Jiffy mixer or paddle. Mix only as much material as can be used within the pot life.

Bonding: As a structural adhesive and bonding fresh concrete to hardened concrete, apply the IMIPOXY LV-50 material neat and work into the substrate by brush roller or spray. Apply the IMIPOXY LV-50 at a thickness of approximately 20 mils (508) or 80 ft²/gal (1.96 m²/L). While the IMIPOXY LV-50 is still tacky, place the fresh concrete. If the IMIPOXY LV-50 is no longer tacky, remove any surface dirt or contaminants and apply another coat of IMIPOXY LV-50.

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For use in anchoring dowels, bolts, reinforcing steel, etc. the depth of the hole should be approximately 9-15 times the bolt diameter. For optimum pull-out, the hole space (annulus)around the bolt in the hole should not exceed 1/4" without aggregate extension. Always disperse the IMIPOXY LV-50 into the anchoring hole filling from the bottom of the hole up. Insert the bolt or dowel by turning it slowly during insertion. After insertion, the hole should be completely filled with IMIPOXY LV-50 and devoid of all air pockets or voids. After insertion, the hole should be completely full of epoxy. To produce a mortar for interior patching repairs, mix 1-41/2 parts by volume clean dry well graded silica sand to 1 part by volume of the mixed IMIPOXY LV-50. Mix thoroughly until all of the sand is completely wet out and evenly dispersed. First, apply a prime coat over the area to be repaired with the neat IMIPOXY LV-50. Place the mortar, working it well into the surface of the concrete before the prime coat becomes tack free. Lifts should not exceed 1" (2.5 cm) in thickness.

APPLICATION PROPERTIES

Mix Ratio	2:1 by volume
Gel Time (ASTM C-881)	31 minutes
Color	Gray
Viscosity	618 cps
CURED PROPERTIES:	
Compressive Yield Strength (ASTM D-695) (at 7 days)	15,130 psi min.(104.3 MPa)
Bond Strength (ASTM C-882)	
2 days	2,810 psi (12.1 MPa)
14 days	3,125 psi (21.6 MPa)
Compressive Modulus (ASTM D-695)	440,090 psi 3,062.73 MPa)
Tensile Strength (ASTM D-638)	8,000 psi (50.81 MPa)
Elongation at Break (ASTM D-638)	2.6%
Water Absorption (ASTM D-570)	0.93%
Heat Deflection Temp	132.1°F

PACKAGING

Unit Sizes:
1 Quart (.95 L) units
1 Gallon (3.8 L) units
2 Gallon (7.6 L) units
10 Gallon (37.8 L) units
16.5 fl. Oz. tubes

LIMITATIONS

If the IMIPOXY LV-50 is no longer tacky during bonding operations, reapplication is allowed after removal of surface contaminents. Always test a small amount of IMIPOXY LV-50 to insure that the product is mixed properly and thoroughly and that the material will harden properly before proceeding with the installation. Do not thin with any solvents. Surface, ambient air andmaterial temperatures must be 40°F(4°C) or above. Do not expose uncured product to cold or freezing temperatures below 35°F(1°C) or 90°F(32°C) for any length of time.

Note: High temperatures will accelerate the setting time and cool temperatures will slow down the setting time. As a general rule, the gel time of the epoxy will be cut in half for each 10°-15° increase in temperatures above 75°F(24°C).

STORAGE

IMIPOXY LV-50 should be stored in a dry environment between 40-90°F(5-32°C). Under these conditions, the shelf life is twelve (12) months in unopened, damage-free containers.