HI-TECH Systems

"HT-500 LV"

Low Viscosity Epoxy Adhesive Binder

Product Description:

Low viscosity for deeper penetration, high strength, two component epoxy adhesive binder. Multipurpose, solvent-free, moisture insensitive general purpose resin adhesive. *HT-500 LV* conforms to ASTM C-881, Types I and IV, Grade 1, Classes B & C for epoxy resin adhesive. An excellent epoxy adhesive for use in crack grouting by pressure injection or gravity-feed, and as a general purpose binder for sealing many concrete slab conditions and for making epoxy patching mortars and grouts.

Applications:

- ✓ Pressure-injection for cracks in structural concrete, masonry, wood, etc.
- ✓ Gravity-feed of cracks in horizontal concrete and masonry.
- ✓ Epoxy resin binder for epoxy mortar patching and overlay of interior, horizontal surfaces.
- ✓ Seal interior slabs and exterior above-grade slabs for water, chlorides, mild chemical attack and to improve performance.
- ✓ Grouting bolts, dowels, pins, etc.

Advantages:

- ✓ Low viscosity.
- ✓ Insensitive to moisture before, during and after cure.
- ✓ Easy mix, convenient volume ratio: Mix 2 parts A to 1 part B.
- ✓ Unique, high-strength, structural adhesive for "can't dry" surfaces.
- ✓ Deep penetrating and tenacious bonding of cracks in structural concrete.
- ✓ High early strength developing adhesive.
- ✓ Excellent chemical resistance for flooring systems.

Performance Data:

Color (A+B)		Amber
Viscosity (mixed)		500 cps
Mix Ration (by volume)		2:1
Pot Life 100 grams @ 77°F		30 mins
Linear Coefficient of Shrinkage		.0043
Absorption	ASTM D-570 24 hrs	0.84 %
Shrinkage	ASTM C-883	Passes
Gel Time	ASTM C-881	45 mins
Heat Deflection Temperature	ASTM D-648	120°F
Bond Strength	ASTM C-882 2 days	2,580 psi
	14 days	3,735 psi
Compressive Strength @73°F	ASTM D-695 7 days	12,385 psi
Tensile Strength @ 73°F	14 days ASTM D-638	7,168 psi
Flexural Strength	ASTM D-790	8,700 psi
Shear Strength	ASTM D-732	8,500 psi

Coverage:

1 gal. of *HT-500 LV* adhesive, when mixed with 5 gal. by loose volume of oven-dried aggregate, yields 808.5 cu. in. of epoxy mortar.

Shelf Life:

1 year in original unopened container.

Storage Conditions:

Store at 40°-95° F. Condition material to 65° – 85° F before using.

Pot Life:

Approx. 30 mins. (11 gram mass)

Appearance:

Compound A = Clear, Compound B = Amber

Available In:

34 oz. cartridges, 3 gallon units, 15 gallon units, and 165 gallon units.

Concrete Application Recommendations:

Surface Preparation:
Surface must be clean and sound. It may be dry or damp, but free of standing water. Remove dust, grease, curing compounds, waxes, foreign particles and disintegrated materials.

Preparation Work:
Concrete: Sandblast or use other approved mechanical means.
Steel: Sandblast to white metal finish.

Bulk Mixing:
For bulk mixing pre-mix each component thoroughly. Place 2 parts by volume of component A and 1 part by volume of component B into a clean pail. Mix thoroughly for 3 minutes with low speed drill (400-600 rpm) until uniformly blended. Mix only the quantity that can be used within its pot life and do not allow mixed material to reside in static mixing head or mixer for more that ten minutes or nozzle blockage may result. To prepare an epoxy mortar, slowly add 4-5 parts by loose volume of and oven-dried aggregate to 1 part of the mixed *HT-500 LV* and mix until uniform in consistency.

Application:

To gravity feed cracks:
Pour neat *HT-500 LV* into vee-notched crack. Continue placement until completely filled. Seal underside of slab prior to filling if cracks reflect through.

To pressure-inject cracks:
Use automated injection equipment of manual methods. Set appropriate injection ports based on system used. Seal ports and cracks with HI-TECH Structural Gel or HI-TECH Structural Gel Fast. When the epoxy adhesive seal has cured, inject *HT-500 LV* with steady pressure. Consult Technical Service for additional information.

To seal slabs:
Spread neat *HT-500 LV* over slab. Allow penetration. Remove excess to prevent surface film. Seal interior slabs and above grade exterior slabs only.

For use as an epoxy mortar:
Prime prepared surface with neat *HT-500 LV*. Place prepared epoxy mortar before primer becomes tack-free. Place the epoxy mortar using trowels. Compact and level with vibrating screed or trowels. Finish with finishing trowel. Exterior application may darken with ultra violet exposure.

Limitations:

- ✓ Minimum surface temperature 40º F.Do not thin ... solvents will prevent proper cure.
- ✓ Use oven-dried aggregate only.
- ✓ Maximum epoxy mortar thickness is 1 ½ in. per lift.
- ✓ Minimum age of concrete must be 21-28 days, depending on curing and drying conditions for mortar and to seal slabs.
- ✓ Not for injection of cracks under hydrostatic pressure.
- ✓ Do not seal exterior slabs on grade.

Safety:

MSDS will be mailed immediately upon receipt of a purchase order or upon request. All personnel should read and understand product Material Safety Data Sheets. Long sleeve overalls or disposable overalls, rubber gloves, splash shields, rubber of leather boots should be worn. Do use near high heat or open flame. Do not take internally. Keep out of the reach of children.

Disposal And Clean Up:

Empty containers must be drip free. Cured product may be disposed of without restrictions. Excess liquid 'A' and 'B' material should be mixed together and allowed to cure, then disposed of in the normal manner. Cured materials may be stripped or peeled from plastic tools and containers. It is recommended that metal tools be cleaned within one hour of use by cutting or peeling cured material form tool.

Warranty:

HI-TECH warrants its products to be free of manufacturing defects and that they will meet HI-TECH's current published physical properties when applied in accordance with HI-TECH's directions and tested in accordance with ASTM and HI-TECH's standards. There are no other warranties by HI-TECH of any nature whatsoever, expressed or implied, including any warranty of merchantability or fitness for a particular purpose in connection with this product. HI-TECH Corporation shall not be liable for damages of any sort, including remote or consequential damages, resulting from any claimed breach of any warranty, whether expressed or implied, including any warranty of merchantability or fitness for a particular purpose or from any other cause whatsoever.