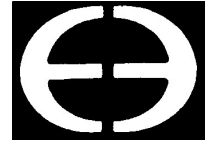


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# E-BOND 550 HI-MOD LV EPOXY



FORMULATED AND LABELED FOR PROFESSIONAL USE ONLY  
NOT FOR SALE TO OR USE BY THE GENERAL PUBLIC

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## PRODUCT DATA

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**DESCRIPTION**

E-BOND 550 HI-MOD Low Viscosity is a 100% solids, solvent-free two-component **MOISTURE INSENSITIVE** epoxy resin system. It develops high early strength to produce a unique **Hi- Modulus** of Elasticity. A multi-purpose Epoxy Resin System, ideal as an Impregnating Sealer and/or primer for spalled areas. E-BOND 550 LV may be used as an epoxy mortar for patching spalls on DRY or DAMP Interior surfaces. It is excellent for pressure injection and gravity feeding cracks in both dry & damp concrete. It may also be used for bolt grouting.

**E-BOND 550 HI-MOD CONFORMS TO ASTM-C-881, TYPE I & IV, GRADE 1, CLASS B & C, AASHTO-M235-91**

**FEATURES:**

- Easy mix ratio of 2 Parts A to 1 Part B by Volume
- Provides a high early strength within 24 hours
- Insensitive to moisture before, during and after cure
- Exterior epoxy mortar/concrete repairs resist thermal movement
- Very Low Viscosity for better penetration
- Low temperature cures – As low as 40°F (4°C)
- Zero VOC - Fully Reactive, No low boiling constituents

**PHYSICAL PROPERTIES / Material & curing conditions@ 75°F and 50% RH**

<b>Type:</b>	Moisture Insensitive & Low Temp. Cure Low Modulus, Low Viscosity Epoxy		
<b>Color:</b>	Part A Resin	Bue	
	Part B Hardener	Yellow	
	Admix	Translucent Green	
<b>Mixing Ratio:</b>	Component A/B	2:1 by volume	
<b>Viscosity:</b>	Ad Mix	ASTM-D-2393 cps (Pas)	300-500 Cps (0.3-0.5 Pa.S)
<b>Pot Life:</b>		ASTM C 881 Modified	25-30 minutes @ 75°F (24°C)
<b>Tack-Free Time:</b> (Thin Film)		40°F (4°C)**	75°F (24°C)**
** Ambient Temperatures		16-18 hours	5½ - 6 hours
			90°F (32°C)**
			3½ - 4 hours
<b>NEAT BINDER</b>			
<b>Bond Strength</b>	ASTM C-882		
2 Days (dry cure) Hardened concrete to hardened concrete or steel			3000 (21) minimum
14 Days (moist cure) Hardened concrete to hardened concrete or steel			2300 (16) minimum
<b>Heat Deflection Temp. – 7 Days</b>	ASTM D-648	122°F (50°C)	
<b>Linear co-efficient of shrinkage on cure</b>	ASTM D-2566	.033 maximum	
<b>Elongation at Break, %</b>		3-4%	
<b>Flexural Strength – 14 Days</b>	ASTM-D-790	12,000 (83)	
<b>Tangent Modulus of Elasticity in Bending</b>		3.7 x 10 <sup>5</sup>	
<b>Compressive Modulus</b>		3.5 x 10 <sup>5</sup>	
<b>Water Absorption 24 Hrs., %</b>	ASTM D-570	.5% maximum	
<b>Tensile Strength, PSI (Mpa) 14 days</b>	ASTM D-638	7500 (52)	
<b>Tensile Elongation</b>		3.5 – 5%	
<b>Modulus of Elasticity</b>		3.6 x 10 <sup>5</sup>	
<b>Compressive Strength, PSI (Mpa)</b>	ASTM D-695	40° F (4°C)**	75°F (24°C)**
		90°F (32°C)**	
24 Hrs.	-----	5000 (34)	8000 (55)
3 days	3000 (21)	10,000 (69)	8500 (59)
7 days	8000 (55)	11,500 (79)	10,400 (72)
<b>EPOXY MORTAR</b> 1 Part Mixed Epoxy to 5 Parts loose aggregate by volume			
<b>Compressive Strength, PSI (Mpa)</b>	ASTM D-695	40° F (4°C)**	75°F (24°C)**
		90°F (32°C)**	
24 Hrs.	-----	5500 (38)	5800 (40)
3 days	5000 (34)	6800 (47)	7500 (52)
7 days	8500 (59)	10,000 (69)	9500 (65)
<b>Compressive Modulus</b>	ASTM D-695	8.2 x 10 <sup>5</sup> maximum	

**For Best Performance**

- Precondition the components to 70°F (23°C) to 80°F (27°C) for 24 hours before use.
- Minimum ambient, surface, aggregate and epoxy temperatures should be 50°F (10°C) and rising at the time of application.
- Store at 55°F to 90°F (15°C to 32°C). Protect from Freezing
- Not for injection of cracks under hydrostatic pressure.
- Do not inject cracks greater than ¼ inch without consulting Technical Service.
- Do not add solvents or water to epoxy material.
- Do not alter or change the recommended proportions when blending the components.



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## **SURFACE PREPARATION:**

All surfaces must be structurally sound, clean and free of dirt, dust, oil, grease or any contaminant that would adversely affect the bond. Surfaces may be dry or damp\*, but free of standing water. On new concrete do not use a curing compound. If curing compounds have been used they must be removed. Sandblast or other approved mechanical methods are recommended.

**STEEL:** Sandblast to white metal finish.

**OLD CONCRETE:** All loose particles or soft, weak sections must be removed. Asphaltic oil, or any foreign contaminants that will affect the bond of the epoxy must be removed. All surfaces should be sandblasted. The sandblasting should completely clean the concrete and expose some aggregate. A minimum of 1/16 inch of the existing concrete surface should be removed. For spalled areas make a vertical saw cut to desired depth a minimum of 2" from distressed area. Remove all loose concrete to sound structural concrete.

## **MIXING:**

Pre-mix each component separately. Place in a clean container, 2 parts by volume of Component A (Resin) and then add 1 part of Component B (Hardener). Container should have a flat wall and flat bottom. Stir and mix until material is thoroughly blended. Mixing should be completed after 2 minutes of thorough blending.

The importance of thorough mix and blending cannot be over emphasized. The two components must be thoroughly mixed and mated. If you are mixing correctly, bubbles will be whipped into the mixture. Do not be concerned; this is a sign that you are mixing well. Improper mixing can result in soft or sticky spots. It is recommended, to eliminate problems of improper mixing, that you use two mixing containers. Mix thoroughly in one container. After you feel it is thoroughly mixed, scrape all the material from one container, to the second container. After material has been placed in the second clean container, thoroughly mix for an additional 1 to 1 ½ minutes. With this double type of mixing, any material that might not have been thoroughly mixed from the sides or the bottom of the first container will be easily placed in the center of the mix in the second container and thus will receive thorough mixing at that time. Mix only that quantity that can be used within its working time.

## **APPLICATION:**

**Impregnating Sealer or Primer** - Due to limited work life of the product it is wise to dump the material from the mixing container on the surface, allow to penetrate. Squeegee off excess while still a liquid. For priming, apply with a stiff brush or broom. Thoroughly and vigorously work into the surface and impregnate any dust that remains on the surface. If desired, broadcast a slight excess of fine granules into wet epoxy to create a non-slip surface.

**To Anchor Bolts, Dowels and Pins** - E-BOND 550 may be used neat, or with larger bolts, add approximately 1½ parts of 20/30 sieve, salt-free, kiln-dried aggregate to 1 volume of mixed E-BOND 550. The angular space around the bolt should not exceed ¼ inch; Depth of embedment is normally 15 times the bolt diameter.

**Spalled Areas (Interior Applications)** - Prime surfaces with E-BOND 550. Apply with stiff brush and work into the surface. To prepare epoxy mortar, slowly add 4-5 parts by loose volume of an oven-dried aggregate to 1 part of mixed E-BOND 550 HI-MODLV, and mix until uniform consistency. Amount of aggregate may vary upon conditions. Apply epoxy mortar while epoxy is still tacky (usually within 15 minutes at 75°F.), finish with steel trowel and screeds. Wipe trowel lightly with a damp rag for a smooth finish. On applications where the patch must resemble that of the adjacent concrete, it is recommended that Portland Cement be sprinkled onto the wet epoxy surface. Lightly sprinkle with water and trowel to a smooth finish.

**Grouting Base Plates** - Add to the mixed E-BOND 550 HI-MOD Epoxy, 1 to 1½ parts of 20/30 sieve, salt-free, kiln-dried aggregate by volume to 1 part of E-BOND 550. Place grout under base plate. Avoid contact with the underside of the plate. A ¼ inch space should remain from the top of the grout and the bottom of the plate. Maximum thickness of group per lift is 1½ inches. If multiple lifts are needed, allow for preceding layer to cool to touch before applying additional layer. The remaining ¼ inch space should be filled with a neat E-BOND 550 HI-MOD. Pour sufficient quantity to neat epoxy to allow the level to rise slightly higher than the underside of the bearing plate.

**Injections** - Ideal for grouting of non-moving cracks in concrete. Recommended that the resin and hardener be maintained at 90°F prior to mixing. Elevated temperatures assist in maintaining reasonable epoxy resin temperatures for full depth penetration in cooler substrates. Cooler temperatures have a tendency of thickening the resin mix rapidly. Mix only that amount of E-BOND HI-MODLV that can be used within the limited working time at the elevated temperatures.

**Gravity** - "Vee" out cracks. Blow and clean out thoroughly with oil-free compressor air. Pour premixed neat E-BOND 550 HI-MOD until cracks are filled. More than one application may be required. Seal other side of slab if cracks are visible prior to filling.

**Pressure** - E-BOND 550 HI-MOD may be used automated injection equipment or manual method. Set injection ports as required by the system used. Seal ports and cracks with E-BOND 590 HI-MOD GEL or E-BOND 501 RAPID SET GEL. When the epoxy adhesive seal has cured, inject E-BOND 550 HI-MODLV with SLOW steady pressure until epoxy reaches next fitting. Crimp fitting and move to next fitting using same procedure along length of crack. If epoxy penetrates through slab, seal other side. After cure, apply direct flame to fittings and remove. Patch holes with E-BOND 590 Epoxy Gel.

**CLEAN-UP**

**Spills** - Ventilate area, and confine spill. Collect with absorbent material. Dispose of in accordance with the current, applicable, State and Federal regulations. Uncured materials can be removed with an approved solvent. Cured material can only be removed mechanically. Clean all tools and equipment immediately after use with a solvent such as Xylene, or Toluene. Clean hands with soap and water or industrial hand cleaner, not solvent.

**Special Note** : E-BOND 550 is a High Modulus Epoxy. In its neat form and/or with minimum filler loading, the cured properties will produce a coefficient of expansion that is dissimilar to Portland cement. Surface temperature changes have a very definite effect on the coefficient of expansion of exterior epoxy mortar/concrete applications. E-Bond 550, when used as an epoxy mortar/concrete for exterior applications can cause stresses at the bond line during these temperature changes.

For exterior applications for either epoxy mortar patching and/or as a sealer on slabs, we recommend E-Bond 540 Low Modulus Superstick Epoxy Resin System.

E-Bond 550 is not recommended as a sealer for exterior applications of slabs on grade.

For bonding fresh plastic Portland - cement to hardened concrete, use E-BOND 580 HI-MOD.

**PACKAGING:** Available in 3 gallon and 15 gallon units.

**COVERAGE:** 1 Gallon of E-Bond 550 HI-MOD LV contains 231 cubic inches. As an impregnating sealer or primer, apply at a rate of 80 to 150 sq. ft. per gallon depending on porosity. 1 gallon 550 mixed with 3½ - 4 gallons of loose aggregate yields 750-800 cu. in. of epoxy mortar. 1 gallon 550 mixed with 1 gallon aggregate will yield approx. 360 cu in. for bolt grouting.

**CAUTION - For professional use only; not for sale to or use by the general public.** E-Bond's epoxies contain alkaline amines. Strong sensitizer; MAY CAUSE SKIN SENSITIZATION or allergic response ranging from a mild wheezing to a severe asthmatic type attack. Avoid contact with skin or eyes. IN CASE OF CONTACT immediately wash skin with soap and water. Flush eyes with water and obtain medical attention. Wear protective clothing, goggles, and barrier cream on all exposed skin

**LIMITED WARRANTY NOTICE:** E-BOND EPOXIES, INC warrants this product to be free from manufacturing defects and to meet the technical properties on the current Technical Data Guide, if used as directed within the shelf life of one (1) year from manufacture date. Satisfactory results depend not only on quality products but also upon many factors beyond our control.

The purchaser must examine the product when received and promptly notify E-BOND EPOXIES, INC in writing of any nonconformity before the product is used and no later than 30 days after such non-conformity is first discovered. If E-BOND, in its sole discretion, determines that the product breached the above warranty, it will, in its sole discretion, replace the non-conforming product, refund the purchase price or issue a credit in the amount of the purchase price. This is the sole and exclusive remedy for breach of this warranty.

The information in this data sheet supersedes all other sales information received by the customer during the sales process. THE FOREGOING WARRANTY SHALL BE EXCLUSIVE AND IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND ALL OTHER WARRANTIES OTHERWISE ARISING BY OPERATION OF LAW, COURSE OF DEALING, CUSTOM, TRADE OR OTHERWISE.

E-BOND shall not be liable in contract or in tort (including, without limitation, negligence, strict liability or otherwise) for loss of sales, revenues or profits; cost of capital or funds; business interruption or cost of downtime, loss of use, damage to or loss of use of other property (real or personal); failure to realize expected savings; frustration of economic or business expectations; claims by third parties (other than for bodily injury), or economic losses of any kind; or for any special ,incidental, indirect, consequential, punitive or exemplary damages arising in any way out of the performance of, or failure to perform, its obligations under any contract for sale of product, even if E-BOND could foresee or has been advised of the possibility of such damages. The Parties expressly agree that these limitations on damages are allocations of risk constituting, in part, the consideration for this contract, and also that such limitations shall survive the determination of any court of competent jurisdiction that any remedy provided in these terms or available at law fails of its essential purpose.