523

PENETRATING SEALER-CRACK HEALER EPOXY PRIMER

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

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DESCRIPTION

E-Bond 523 is a 2-component super low viscosity, solvent free, 100% solids, moisture-tolerant, epoxy crack healer / penetrating sealer which produces a fast tack free time to minimize downtime. An ultra-low viscosity epoxy for grouting both dry and damp cracks and as a penetrating sealer to strengthen and protect weak and porous concrete substrate.

A low modulus epoxy particularly formulated for both interior and exterior above grade surfaces exposed to both thermal and mechanical movement. Formulated with the same epoxy technology as E-Bond 526 Multi-Coat Thin Set Epoxy Polymer Overlay. E-Bond 526 has a highly successful 15 year track record with excess of 18 million square feet in place across United States and Canada as a waterproofing, anti-skid overlay with deicing capability to reduce or prevent frost and ice formation for Bridge and Parking Decks.

FEATURES

- Convenient easy to use 2:1 by volume
- Moisture Tolerant*, before, during, and after cure.
- Solvent Free, fast tack free time, open to vehicular traffic in under 4 hours
- High Bond Strength
- Good chemical resistance to icing solutions and automotive fluids for long-term protection.
- Zero VOC

BENEFITS

- Non-flammable, eliminates the dangerous safety and health hazards, of flammable and oxidizers materials associated with High Molecular Weight/ Methyl Methacrylates during handling, mixing, application, transporting, and storage.
- Very low viscosity, for easy topical applications and excellent penetration of cracks down to .003 inches in width by gravity and capillary action
- Fully Reactive, No low boiling constituents

*Although E-Bond 523 is Moisture Tolerant, Applications should be applied to dry concrete for maximum penetration

WHERE TO USE

• As a topical application on porous and/or cracked concrete to restore structural integrity. • For bridges, parking garages, horizontal decks, patios, driveways and other structures exposed to foot and tire traffic.• As a penetrating sealer to protect sound concrete against water absorption and chloride-ion intrusion on both interior and exterior above grade surfaces. • For gravity filling of free cracks, reconsolidating distressed areas and strengthening of weak and porous concrete substrate.

LIMITATIONS

- Do not apply when substrate surface temperature is 120°F (49°C) or higher, high daily temperature cycles may cause out gassing and resist penetration of Sealer.
- Seal underside of slab before filling if cracks reflect through.
- Material is a vapor barrier after cure
- Do not install when vapor pressure exceeds 3lbs/1000sq ft² for 24 hours when using the anhydrous calcium chloride test(ASTM-F1869)
- Do not apply over wet, shimmering surface, or concrete subject to hydrostatic pressure.
- For applications on exterior on-grade substrates, consult Technical Service.
- E-Bond 523 is a fast setting material with minimum working time in the mixing container; dump all of the material from the mixing container as soon as the sealer is properly mixed, immediately spread and broadcast.
- Use only bagged oven-dry aggregate of required size and shape.
- If a 2nd coat is required; the second coat or overlay must be applied while the first coat is still tacky.
- Proper application is the responsibility of the user. Field visits by E-Bond personnel are for the purpose of making technical recommendations only and are not for supervising or providing quality control on the jobsite.

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PHYSICAL PROPERTIES

(Material and curing conditions @ 75°F (24°C) and 50% R.H.)

Type:	Moisture Insensitive & Low Temperature Cure Low Modulus, Ultra Low Viscosity Epoxy	
Color:	Part A Resin	Light Straw
	Part B Hardener	Dark Amber
	Admix	Amber
Mixing Ratio:	Component A/B	2:1 by volume
Viscosity (Ad-Mix):	ASTM-D-2393 cps (Pas)	<100 (.1)
Gel Time:	ASTM C 881 Modified	20-30 Minutes
Tack-Free Time:	Californian Test Method 551	90 Minutes
Bond Strength:	Californian Test Method 551 PCC Saturated, Surface –Dry Bond Test Min. 3.5 MPa (507psi) at 21±1ºC	890 psi (6 MPa) PCC failure
Slant Shear:	ASTM C 882 2 days	1500-1850 psi (10-13 MPa)
	14 days(moist cure)	2000-3500 psi (14-24-MPa)
Tensile Properties:	14 days ASTM D 638 Type I	
	Tensile Strength	2500-5000
	Tensile Elongation	30-80 %
Solids Content		100%
Shelf Life:	1 year in original unopened container	
Storage:	Store Dry at 40ºF (4.4ºC)-95ºF(35ºC) .Condition to 65ºF (18ºC)-75ºF(24ºC) before using. Protect from inclement weather and freezing.	

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).
- Apply When Slab is Cooling; near the end of day.
- Protect from freezing.
- Do not add solvents or water to epoxy material.
- Do not alter or change the recommended proportions when blending the components.

*It is highly recommended that all components be conditioned in advance of use to 75°F (24°C). This may take 48 hrs.

HOW TO USE 523 PENETRATING SEALER-CRACK HEALER EPOXY PRIMER

SURFACE PREPARATION

CONCRETE

All surfaces must be prepared to a structurally dense stable and dry surface Remove weak, contaminated deteriorated concrete, asphalt materials, oils, dirt, rubber, curing compounds, paint, carbonation, laitance, and other potentially detrimental materials by shot-blasting, sand blasting, ultra-high pressure water blasting (min. 5000 psi), bush hammering or other suitable mechanical means. Surface preparation by bush hammering, grinding, and milling can create minute fractures or micro cracking in the substrate, which may require re-shotblasting to a structurally dense surface with an ICRI profile of CSP #4. Blow, sweep or power-sweep the surface area to be treated. Blow loose material from visible cracks using oil free with a high pressure air blast.

Steel

Steel should be cleaned and prepared by sandblasting to conform to SSPC-SP10 Specification with a 4 mil (0.1mm) minimum anchor profile. If flash rust appears, the surface must be re-blasted to obtain minimum anchor profile.

Mixing

For best results, prior to mixing condition the components to 65°-85°F (18°-29°C). Stir each component prior to blending. Proportion Two (2) parts by volume of Component A and one (1) part of Component B into a clean container with flat wall and bottom. Mix thoroughly for a minimum of three minutes using a low speed drill (600 rpm) and a mixing paddle (e.g. a Jiffy® and/or Plunge Mixer™). Keep the paddle below the surface of the material to avoid entrapment of air. Thorough mixing of both components is important to obtain optimum results. Carefully scrape the sides and bottom to ensure thorough mixing.

E-Bond 523 has a shortened working time in the mixing container and limited working time for spreading and broadcasting. Mix only the amount of material that can be used before setup (hardening) occurs in the mixing container. Do not allow the mixed material to remain in the mixing container.

Leaving curing product in the mixing container will generate excessive heat and may generate potentially hazardous smoke. If smoke occurs DO NOT BREATHE THE SMOKE. Place in a well ventilated area, cool outside of can with water, DO NOT POUR WATER INTO CAN.

Use safety glasses, clean Neoprene rubber cloves, review MSDS for recommendations for additional safety and respiratory protection.

Application

For All Applications: The user must schedule his project within the limited working time and rapid strength development.

Bagged Oven-Dried Silica Sand (*WHEN AGGREGATE IS SPECIFIED IT IS TO BE BAGGED OVEN-DRIED)

Aggregate is usually available from suppliers listed in the Yellow Pages under 'Sandblasting Equipment and Supplies'. For most applications 20-30 mesh sand blast sand is sufficient. For additional information of various types of aggregate including angular hard aggregate for maximum skid and friction resistant surfaces,
contact info@ebondepoxies.com.

Installing Healer Sealer: Quickly pour the mixed material from the mixing container and flood coat the surface area approx. 75-120 ft²/gal., by squeegee, roller or broom. Allow to pond over cracks, let the material penetrate into the substrate for approximately 10 minutes, and distribute the material evenly with a squeegee, roller or a broom on textured surfaces, removing excess epoxy leaving the minimum amount of material possible on the surface. Repeat the process until the substrate is sealed. The substrate should appear wet looking with no noticeable surface film. After application of sealer allow a waiting period of 20 minutes or less when substrate temperature exceeds 90º F (32ºC) and broadcast to excess (approx. 3 lb/yd²). Do not remove aggregate or open to traffic until the treated surface is tack-free and aggregate is set sufficiently to resist movement by pressing a coin or screwdriver against the aggregate. Remove aggregate by broom, vacuuming prior to opening to traffic.

Installing Healer Sealer as a Primer: Any second or subsequent toppings must be applied while the primer remains tacky. If time constraints or weather will not permit the immediate application of an additional coating or topping while the sealer primer is till tacky, immediately broadcast fine grade silica sand to the point of rejection while the primer is still tacky. Allow to fully cure, and then remove surplus loose aggregate by booming or vacuuming. The imbedded aggregate in the primer will improve the adhesion of subsequent toppings or coatings .If all or part the primer reaches a tack free condition prior to the placement of the aggregate allow to cure no longer than 24 hours. Consider high pressure water blasting with a solution of water and Dawn© Dishwashing detergent to remove and clean the surface of a phenomenon known as amine blush (a bond breaker) which can be created by humidity and temperature fluctuations during the curing process. Rinse thoroughly to remove the dissolved blush and allow to dry completely before applying a subsequent layer of epoxy.

Gravity Feeding of Cracks >**1/8";** (Non-Moving)

For cracks greater 1/8", vee out, blow out loose material using oil free, high pressure air blast.

Fill crack with oven-dried silica sand, pond with 523 Sealer. Continue placement until completely filled. If necessary, seal the underside of the slab prior to filling of cracks. All dynamic cracks >1/8" should be treated as joints and sealed with an appropriate joint sealer.

COVERAGE: 1 Gallon of E-Bond #523 Penetrating Sealer on a smooth surface covers approximately 75-120 ft²/gal. Coverage is affected by porosity of the concrete and open cracks. Coverage may be less than on rough surfaces

PACKAGING: Available in 3 and 15 gallon units. Available in larger units on request.

CLEAN-UP: Ventilate area. Confine spill. Collect with absorbent material. Dispose of in accordance with current, applicable local, state, and federal regulations. Uncured material can be removed with approved solvent. Cured material can only be removed mechanically.

FIRST AID: In case of skin contact, wash immediately and thoroughly with soap and water. For eye contact, flush immediately with plenty of water for at least 15 minutes; contact physician immediately. For respiratory problems, remove person to fresh air. Wash clothing before re-use.

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.

VOC Content:
0 lbs/gal or 0 g/L, less water and exempt solvents

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 shelf life. 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.

TRANSPO® INDUSTRIES, INC.
www.transpo.com
Phone: (914) 632 - 1000
Fax: (914) 636 - 1282
info@transpo.com

E-BOND EPOXIES, INC.
501 N.E. 33RD ST
P.O. BOX 23069
FT. LAUDERDALE, FL 33307
TOLL FREE : (877) 265-0011
PHONE: (954) 566-6555
FAX: (954) 566-6663
E-Mail: info@ebondepoxies.com
www.ebondepoxies.com

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