



MASONS SUPPLY COMPANY

OREGON • WASHINGTON

MASCOBOND HI MOD LV

DESCRIPTION

MASCOBOND HI-MOD LV is a 100% solids, two component moisture insensitive, high modulus, low viscosity, epoxy resin adhesive system.

USES

- Pressure injecting of cracks in structural concrete, masonry, wood, etc.
- Grouting bolts, dowels and pins.
- Gravity feed of cracks in horizontal concrete and masonry.
- Epoxy binder for epoxy mortar patching and overlay of interior horizontal surfaces.

FEATURES AND BENEFITS

- Very low viscosity.
- Easy 1 to 1 mixing ratio.
- High early strength gain.
- Insensitive to moisture before, and after cure.
- Excellent adhesive to most structural materials.
- Deep penetrating ability for bonding cracks.

PHYSICAL PROPERTIES

Type:	Moisture Insensitive & Low Temperature Cure Hi-Modulus Epoxy Low Viscosity	
Mixing Ratio:	1A to 1B by volume	
Color:	Part A Resin	Clear
	Part B Hardener	Amber
	Ad-Mix	Amber
Viscosity (ASTM C-881):	500-800 cps	
Pot Life (ASTM C-881):	Approx. 30 min	
Tack Free Time @ 75° F*:	2-4 hrs	
Bond Strength (ASTM C-882):	2 days	2,300 psi
	14 days	2,700 psi
Water Absorption (ASTM D-570):	.26%	
Heat Deflection (ASTM D-648):	122°F	
Linear Co-Efficient of Shrinkage (ASTM D-2566):	.0004	
Compressive Strength (ASTM D-695):	10,000 psi	
Compressive Modulus (ASTM D-695):	2.6x10 ⁵	
Tensile Strength (ASTM D-638):	7,000 psi	
Elongation at Break (ASTM D-638):	2.9%	
Flexural Strength (ASTM D-790):	8,700 psi	
Filler Content (ASTM C-881):	0.0%	
Shear Strength (ASTM D-732):	8,500 psi	
Thermal Compatibility (ASTM C-884):	Pass	
Shrinkage (ASTM C-883):	Pass	
*Ambient Temperature		

SURFACE PREPARATION

Surface must be clean and sound. It may be dry or damp, but free of standing water. Remove dust, laitance, grease, curing compounds, impregnations, waxes, foreign particles, disintegrated materials. Preparation work: **Concrete** - Sandblast or use other approved mechanical methods. **Steel** - Sandblast to white-metal finish.

MIXING INSTRUCTIONS

Material must be conditioned at 70°F for at least 24 hours prior to application.

Binder: Pre-mix each component separately. Place in a clean container, 1 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. MIX THOROUGHLY for 3 minutes with a paddle on a slow speed drill (400 or 600 rpm). Scrape the sides and bottom of bucket thoroughly while mixing. Mix only the amount that can be used within the working life of the product. The importance of thorough mix and blending cannot be over emphasized. The two components must be thoroughly mixed and mated. Improper mixing can result in soft or sticky spots.

Mortar: Mix Components A and B as above, then slowly add MASCOBOND AGGREGATE to pre-mix binder and mix to obtain a uniform consistency. Amount of aggregate may vary upon conditions. Recommended maximum aggregate is 4 volumes of aggregate to 1 volume of mixed binder.

APPLICATION TECHNIQUES

Anchor bolts, dowels and pins: Use neat. For efficient transfer of stress, the hole should be no greater in diameter than 1/4 in. larger than the bar, pin, or rod to be embedded. Depth of embedment is typically 10 to 15 times the bar diameters.

Mortar: Prime surface with premixed neat MASCOBOND HI-MOD LV. Apply with stiff brush and work into surface. Apply epoxy mortar while epoxy is still tacky (usually within 15 minutes at 75°F) Finish with screed and steel trowel. Wipe trowel lightly with a damp rag with solvent or water for a smooth finish.

Injection: Ideal for grouting of non-moving cracks in concrete. Recommended that the resin and hardener be maintained at 75°F prior to mixing for lowest possible viscosity. Cooler temperatures have a tendency of thickening the resin mix rapidly. Mix only that amount of MASCOBOND HI-MOD LV you can use in the working time of the product.

Gravity: "Vee" out cracks. Blow and clean out thoroughly with oil-free compressor air. Pour pre-mix MASCOBOND HI-MOD LV until cracks are filled. More than one application may be required.

Pressure: MASCOBOND HI-MOD LV may be used with automated injection equipment or manual method. Set injection ports as required by the system used. Seal ports and cracks with MASCOBOND HI-MOD GEL. When the epoxy adhesive seal has cured, inject MASCOBOND HI-MOD LV 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. Patch holes with MASCOBOND HI-MOD GEL.

Note: For bonding fresh plastic portland cement or concrete to hardened concrete, use MASCOBOND HI-MOD.

COVERAGE

Mortar: 1 gallon of MASCOBOND HI MOD LV when mixed with 4 gallons of MASCOBOND AGGREGATE by volume will yield approximately .60 cubic foot. **Primer:** approximately 80 to 150 sq. ft. depending on texture and porosity of surface. **Grout:** Yields approximately 231 cubic inches per neat gallon.

COMPLIANCE

MASCOBOND HI-MOD LV conforms to ASTM C-881-90 Type I, and IV, Grade 1 Class B & C and AASHTO M-235 for epoxy resin systems.

TEMPERATURES

Will cure at temperatures as low as 40°F providing the temperature will be 40°F and rising during the next 72 hours. Epoxy materials and aggregate should be stored at least 24 hours prior to use at 70°F, or higher. Epoxies stored below 60°F, will cause the epoxy to thicken substantially, making it difficult to properly blend the two materials and obtain a proper mating of resin and hardener. PROTECT FROM INCLEMENT WEATHER AND FREEZING. If product temperature falls below 50°F it is recommended that a product temperature of 70°F be obtained prior to using.

CAUTIONS

Minimum application temperature 40°F. Minimum age of concrete must be 21-28 days depending on curing and drying conditions. Test for moisture vapor transmission prior to application. Moisture passing through the substrate by pressure during the application and after curing of epoxy will cause bond failures. Material is a vapor barrier after cure. For application on exterior, on-grade substrates, consult Technical Service. For spray application, consult Technical Service. Do not thin with solvent. Solvent will prevent proper cure. Use only oven dry aggregate. Epoxy mortar is for interior use only. For multiple lifts consult Technical Services. Ultraviolet light can discolor Masco Hi-Mod LV. Not for injection of cracks under hydrostatic pressure. Do not inject cracks greater than 1/4 in. without consulting Technical Service. Due to many variables in bonding to damp surfaces, be certain to test application under the same conditions as the full-scale work.

PACKAGING

2 gallon units. Available in larger units upon request.

Storage: 60-85°F

Protect from freezing.

Shelf Life: 1 year, unopened, protected storage.

Freight Class: Class 60

DOT/UN Shipping Name: Polyamines, Liquid, Corrosive, NOS (Alkaline Amine)

DOT Hazard Class: Class 8 (Corrosive Liquid), PGIII

Other Requirements: UN 1760

HAZARDS IDENTIFICATION

Component "A": Vapors from product may cause irritation to the nose, throat, and respiratory tract. Coughing and chest pains may result. High vapor concentrations may produce CNS depression. Product may cause severe eye irritation. Skin contact with product may cause irritation, redness, and discomfort which is transient. Product may be slightly toxic if ingested. Repeated exposure may cause skin sensitization, skin irritation, and dermatitis. Preexisting eye, skin, and respiratory disorders may be aggravated by exposure of this product.

Component "B": Vapors/mist may be corrosive to upper respiratory tract. Repeated or prolonged exposure can result in lung damage. Lung damage may be evidenced by shortness of breath and may be accompanied by chronic cough. Product may cause irritation to the eyes. Corrosive to eyes and may cause severe damage including blindness. Corrosive to the skin; may cause skin sensitization. Ingestion may cause permanent damage to the mouth, throat, and stomach. Repeated exposure

may cause skin sensitization or sensitization to the respiratory tract and development of an asthmatic reaction to future exposure. Preexisting eye, skin, and respiratory disorders may be aggravated by exposure of this product.

FIRST AID

For inhalation, remove victim from exposure. If victim has difficulty breathing, administer oxygen. If breathing has stopped, administer artificial respiration. Seek medical attention. For eye contact, flush eyes with water for 15 minutes, lifting upper and lower lids occasionally. Seek medical attention. For skin contact, immediately remove contaminated clothing. Wash thoroughly with soap and water for at least 15 minutes. If irritation occurs, get medical attention. Do not reuse clothing until thoroughly cleaned. For ingestion, do not induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Seek medical attention.

CLEANUP INSTRUCTIONS

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

TECHNICAL SERVICE

For Technical Service on all Masons Supply products contact:

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