MASCO

MASONS SUPPLY COMPANY

OREGON • WASHINGTON

MASCOBOND HI-MOD

DESCRIPTION

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

USES

- Bonding fresh, plastic concrete to hardened concrete & steel.
- Grouting bolts, dowels and pins in vertical holes.
- Grouting horizontal cracks in structural concrete & wood by gravity feed
- Structural adhesive for concrete, wood and masonry

FEATURES AND BENEFITS

- Easy 1 to 1 mixing ratio.
- Insensitive to moisture before and after cure.
- Excellent adhesion to most structural materials.
- Fast initial set; rapid strength gain for high strength applications.

PHYSICAL PROPERTIES

Type:	Moisture Insensitive & Low Temperature Cure Hi-Modulus Epoxy Medium Viscosity	
Mixing Ratio:	1A to 1B by volume	
Color:	Part A Resin	Gray
	Part B Hardener	Amber
	Ad-Mix	Gray
Viscosity (ASTM D-2393):		3,500 cps
Pot Life (ASTM C-881):		Approx. 30-40 min
Tack Free Time @ 75°F* :		3-4 hrs
Bond Strength (ASTM C-882):		2 days 2,500 psi
		14 days 2,900 psi
Water Absorption, 24 hrs (ASTM D-570):		.40%
Heat Deflection Temperature (ASTM D-648):		125°F
Linear Co-Efficient Shrinkage (ASTM D-2566):		.0016
Compressive Strength (ASTM D-695):		10,000 psi
Compressive Modulus (ASTM D-695):		$3.4x10^5$
Tensile Strength (ASTM D-638):		7,000 psi
Elongation at Break (ASTM D-638):		2.5%

*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.

Bonding Agent: Pre-mix each component separately. Place in a clean container, 1 part 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 2 MASCOBOND AGGREGATE to pre-mix binder and mix to obtain a uniform consistency. Amount of aggregate may vary upon conditions. Recommended maximum aggregate is 2.5 volumes of aggregate to 1 volume of mixed binder.

APPLICATION TECHNIQUES

Bond fresh concrete to hardened concrete: Apply by brush, roller, broom. Thoroughly and vigorously work into the surface. Place fresh concrete while MASCOBOND HI-MOD is still tacky. If coating becomes glossy and loses tackiness do not apply topping, consult Technical Service.

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 bar diameters.

Mortar: Prime surface with premixed neat MASCOBOND HI-MOD. 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 steel trowel and screeds. Wipe trowel lightly with a damp rag with solvent or water for a smooth finish.

COVERAGE

Bonding adhesive: 1 gallon of MASCOBOND HI-MOD covers approximately 75 to 100 square feet on smooth surfaces. **Grout:** yields approximately 231 cubic inches per gallon. **Mortar:** 1 gallon of MASCOBOND HI-MOD when mixed with 1-40 lbs of MASCOBOND AGGREGATE will yield approximately .40 cubic foot.

COMPLIANCES

MASCOBOND HI-MOD conforms to ASTM C-881-90 Types I, II, IV, and V Grade 2 Classes B & C and AASHTO M-235 for epoxy resin systems.

TEMPERATURES

Will cure at temperature as low as 40°F, providing the temperature will be 40°F and rising during the next 72 hours. Epoxy materials 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 dying 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 MASCOBOND HI-MOD. 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
½ gallon and 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 approved solvent. Cured material can only be removed mechanically.

TECHNICAL SERVICE
For Technical Service on all Masons Supply products contact:

MASONS SUPPLY
2637 SE 12th Ave
Portland, OR 97202
(503)234-4321, FAX (503)234-5606
masco.net

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