

EUCO #452 EPOXY SYSTEM

ASTM C 881 COMPLIANT, HIGH MODULUS ADHESIVE

DESCRIPTION

EUCO #452 EPOXY SYSTEM is a 100% reactive, 2 component material designed as a moisture insensitive adhesive and binder for numerous application needs. This high modulus material is available in a low viscosity (LV), medium viscosity (MV) or GEL consistency. EUCO #452 provides normal working times when bonding concrete at temperatures above 40°F (4°C).

PRIMARY APPLICATIONS

- Bonding concrete, steel, ceramic or wood
- Anchoring bolts, dowels, and pins
- General adhesive needs
- Bonding concrete toppings
- GEL formulations are used for vertical and overhead bonding, anchoring, and repair
- Filling cracks in concrete and masonry

FEATURES/BENEFITS

- Moisture insensitive for bonding to dry or damp surfaces
- Bonds fresh concrete toppings to hardened concrete slabs
- Forms a tough, wear and chemical resistant coating for industrial floor slabs
- May be extended with sand or aggregate for thick applications and mortar repairs
- Designed for use at temperatures of 40°F (4°C) and above
- Can contribute to LEED points

TECHNICAL INFORMATION

PROPERTY	#452 LV	#452 MV	#452 GEL	#452 CARTRIDGE MV	#452 CARTRIDGE GEL
Gel Time	30 minutes	30 minutes	30 minutes	6 to 8 minutes	30 minutes
Working Time	90 minutes	90 minutes	90 minutes	10 to 20 minutes	90 minutes
Bond Strength	3,200 psi (22 MPa)	2,500 psi (17 MPa)	2,000 psi (14 MPa)	2,200 psi (15 MPa)	2,230 psi (15 MPa)
Water Absorption	0.15%	0.081%	0.4%	0.36%	0.31%
Compressive Modulus	397,600 psi (2,741 MPa)	321,664 psi (2,218 MPa)	265,000 psi (1,827 MPa)	378,000 psi (2,606 MPa)	285,000 psi (1,965 MPa)
Compressive Strength	11,360 psi (78 MPa)	12,890 psi (89 MPa)	10,000 psi (69 MPa)	10,900 psi (75 MPa)	10,200 psi (70 MPa)
Appearance, Mixed	Gray	Gray	Gray	Amber-Clear	Gray

Properties shown were determined at laboratory conditions.

PACKAGING

EUCO #452 epoxies are two part systems. Bulk packaged material is mixed at a 2 to 1 ratio by volume, Part A to Part B. The units are pre-proportioned and packed in 3 gal (11.4 L) units and 1 gal (3.8 L) units. EUCO #452 MV & GEL is also available in 12/22 fl. oz cartridges (0.7 L) mixed at a 1:1 ratio. Cartridges yield 37 in³ of epoxy.

SHELF LIFE

2 years in original, unopened package.

SPECIFICATIONS/COMPLIANCES

EUCO #452 LV complies with ASTM C 881 Types I, II, IV, and V, Grade 1, Class B and C.

EUCO #452 MV complies with ASTM C 881 Types I, II, IV, and V, Grade 2, Class B and C.

EUCO #452 GEL complies with ASTM C 881 Types I, II, IV, and V, Grade 3, Class B and C.

EUCO #452 CARTRIDGE MV complies with ASTM C 881 Types I and IV, Grade 1, Class A, B, and C.

EUCO #452 CARTRIDGE GEL complies with ASTM C 881 Types I, II, IV, and V, Grade 3, Class B and C.



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COVERAGE

EUCO #452 LV: 125 ft²/gal (3.1 m²/L) for priming/sealing
25 ft²/gal (0.6 m²/L) for 1/4" (6 mm) mortars
EUCO #452 MV: 100 ft²/gal (2.5 m²/L) for bonding toppings
20 ft²/gal (0.5 m²/L) for 1/4" (6 mm) mortars
EUCO #452 GEL: 60 ft²/gal (1.5 m²/L) for bonding toppings
15 ft²/gal (0.4 m²/L) for 1/4" (6 mm) mortars

Note: Coverage will vary with concrete surface texture, temperature, and the gradation of sand used for mortars. Coverage rates shown are approximate.

DIRECTIONS FOR USE

Surface Preparation: New concrete must be a minimum of 28 days old and possess an open, porous and textured surface with all curing compounds and sealers removed. Old concrete must be clean and well textured. All oil, dirt, debris, paint and unsound concrete must be removed. The surface should be prepared mechanically using equipment that will give a surface profile commensurate with the application. The final step in cleaning should be the complete removal of all residue with a vacuum cleaner or pressure washer.

Bulk Mixing: All materials should be in the proper temperature range of 60°F (16°C) to 90°F (32°C). Mix parts A and B (resin & hardener) using a drill and mixing prop. The epoxy must be well mixed to a uniform color with no streaking in order to ensure proper chemical reaction. If aggregate is to be added, the aggregate is added to the epoxy after the part A and part B have been premixed together. Place immediately.

Application: (Priming, Bonding Or Sealing): Use either Low Viscosity or Medium Viscosity formulations in these applications. Apply material by roller, brush, or squeegee in a uniform fashion. Do not allow the material to puddle. Extremely porous surfaces may require a second coat for proper ultimate performance.

Priming & Bonding: If using EUCO #452 as a bonding agent for a cementitious topping, place the topping on the EUCO #452 while the epoxy is still wet. If the epoxy has become "tacky" to the point where it is no longer a sticky liquid, a fresh coat of EUCO #452 must be applied before the topping is placed.

Sealing: If a second coat of EUCO #452 is to be placed on the concrete, the first coat should be slightly tacky (4 to 10 hours old) when the second coat is applied. A slip resistant surface can be created by broadcasting silica sand (20 to 50 mesh) into the coating and then backrolling to embed the sand.

Repair Mortars: Repair mortars can be made with these products by adding aggregate. Size, gradation and the amount of aggregate will be determined by the application. The surface should be primed with EUCO #452 LV prior to application of the repair mortar. Mix the epoxy unit (Part A with Part B) prior to adding the aggregate. Trowel the mortar into place. If the surface is too rough, a topcoat of either EUCO #452 LV or MV can be applied.

Cartridge Epoxy Application Instructions: Remove cap and divider plugs. Attach mixer tip and dispense epoxy with smooth, constant pressure. Discard epoxy until a uniform, streak-free color is achieved. **Anchor installation:** Insert the static mixer tip and fill hole from the bottom, slowly withdrawing the tip as the epoxy is dispensed until the hole is approximately half full. Insert the anchor with a slow, twisting motion to ensure complete epoxy contact with no air voids. Stabilize anchor until epoxy is cured.

CLEAN-UP

Clean tools and equipment with solvent such as EUCO SOLVENT, xylene, or acetone before the epoxy hardens.

PRECAUTIONS/LIMITATIONS

- This product may vary in color and may yellow and chalk in prolonged exposure to sunlight.
- Bring materials as close to 70°F (21°C) as possible. Store in room temperature environment 24 hours prior to use. Do not heat with open flame.
- Store indoors at 45°F to 110°F (7°C to 43°C).
- Epoxy components may cause skin irritation.
- Do not apply over freestanding water.
- Do not apply over hardened primer or old epoxy without proper surface preparation.
- Not recommended for use as a surface sealer over new concrete less than 30 days old.
- Not recommended for use when base concrete is at a temperature under 40°F (4°C).
- In all cases, consult the Material Safety Data Sheet before use.

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WARRANTY: The Euclid Chemical Company ("Euclid") solely and expressly warrants that its products shall be free from defects in materials and workmanship for one (1) year from the date of purchase. Unless authorized in writing by an officer of Euclid, no other representations or statements made by Euclid or its representatives, in writing or orally, shall alter this warranty. EUCLID MAKES NO WARRANTIES, IMPLIED OR OTHERWISE, AS TO THE MERCHANTABILITY OR FITNESS FOR ORDINARY OR PARTICULAR PURPOSES OF ITS PRODUCTS AND EXCLUDES THE SAME. If any Euclid product fails to conform with this warranty, Euclid will replace the product at no cost to Buyer. Replacement of any product shall be the sole and exclusive remedy available and buyer shall have no claim for incidental or consequential damages. Any warranty claim must be made within one (1) year from the date of the claimed breach. Euclid does not authorize anyone on its behalf to make any written or oral statements which in any way alter Euclid's installation information or instructions in its product literature or on its packaging labels. Any installation of Euclid products which fails to conform with such installation information or instructions shall void this warranty. Product demonstrations, if any, are done for illustrative purposes only and do not constitute a warranty or warranty alteration of any kind. Buyer shall be solely responsible for determining the suitability of Euclid's products for the Buyer's intended purposes.