

# FLEXOLITH

## LOW MODULUS EPOXY BINDER FOR POLYMER CONCRETE

### DESCRIPTION

**FLEXOLITH** is a two component, 100% solids, low modulus, moisture insensitive epoxy binder with properties which makes it suitable for use in applications where stress relief and resistance to mechanical and thermal movements are required. FLEXOLITH is formulated for low temperature applications, or where rapid cure is required.

### PRIMARY APPLICATIONS

- Parking decks
- Bridges
- Factories
- Warehouses
- Loading docks
- Nosing repair applications

### FEATURES/BENEFITS

▲ Can contribute to LEED points.

### TECHNICAL INFORMATION

#### Material Properties @ 75°F (24°C), 50% RH

**Mixing Ratio** by volume (Part A:B) ..... 1:1

**Mixed Viscosity**, cps ..... 1700  
 Brookfield Viscometer, Model RVT

**Gel Time**, min., ASTM C 881, Class B ..... >30

**Tensile Strength**, psi (MPa)

ASTM D 638 ..... 2700 (18.62)

**Tensile Elongation**, % ASTM D 638 ..... 30 to 60

**Compressive Strength**, psi (MPa)

ASTM D 695 ..... 5000 (34.5)

**Compressive Modulus**, psi (MPa) 120,000 (827)

**Compressive Strength**, psi (MPa),

ASTM C 109 (3 parts sand) Mortar

@ 4 hours ..... 1400 (9.65)

@ 24 hours ..... 7040 (48.5)

#### Bond Strength, ASTM C 882 psi (MPa)

2 days ..... 2100 (14.5)

7 days ..... 2400 (16.5)

#### Chloride Permeability

AASHTO T 77, ASTM C 1202, ..... <100 coulombs

**Hardness, Shore D**, ASTM D 2240, min. .... 65

**Water Absorption**, 24 hr. % ASTM D 570 ..... <0.5

**Thermal Compatibility**, ASTM C 884 ..... Passes

**Effective Shrinkage**, ASTM C 883 ..... Passes

#### Appearance

Clear, Light Gray, Dark Gray, and Tile Red

### PACKAGING

FLEXOLITH is available in 4 gal (15.14 L) cases and 10 gal (37.85 L) units.

### SHELF LIFE

2 years in original, unopened, properly stored package.

### SPECIFICATIONS/COMPLIANCES

• ASTM C 881-99, Type III, Grade 1 Class B

• AASHTO M 235, Type III, Grade 1

### COVERAGE

#### Overlays Broadcast Method: ft<sup>2</sup>/gal (m<sup>2</sup>/L)

	1st Coat	2nd Coat	Seal Coat
FLEXOLITH	40 to 50 (.98 to 1.23)	30 to 40 (.74 to .98)	100 to 120 (2.45 to 2.94)
Aggregate (lbs/ft <sup>2</sup> )	1.2 to 1.5 (.5 to .7 kg)	1.5 to 2.0 (.7 to .9 kg)	—

#### Trowel down (mortar):

FLEXOLITH (neat, prime coat) 200 ft<sup>2</sup>/gal (4.19 m<sup>2</sup>/L)

Coverage @ 1/4" thickness (Flexolith mortar):

2 to 3 gals 20/40 mesh sand

and 1 gal resin 16 to 20 ft.<sup>2</sup> (1.49 to 1.86 m<sup>2</sup>)

Seal Coat 150 to 250 ft.<sup>2</sup> gal (3.68 to 6.14 m<sup>2</sup>/L)

**Note:** Coverage rates are for estimating purposes only. Surface temperature, porosity, and texture will determine actual material requirements.

Low Modulus Epoxy Binder for Polymer Concrete

FLEXOLITH

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## DIRECTIONS FOR USE

**Surface Preparation:** Concrete must be structurally sound, dry, free of grease, oils, coatings, dust, curing compounds and other contaminants. Remove oil, grease smear and asphalt residue with trisodium phosphate or a strong detergent. For heavy oil contamination use steam cleaning in conjunction with a strong emulsifying detergent. Surface laitance must be removed. The preferred method of surface preparation is abrasive blasting. If it is not possible to abrasive blast, acid etch with 15% hydrochloric acid solution.

Follow by pressure washing with copious amounts of water to neutralize the surface. The pH of the surface should be checked according to ASTM D 4262 after washing. Rinse thoroughly with potable water. After cleaning, repair defective concrete, honeycombs, cavities, joint cracks, voids and other defects by routing to sound material and patching as needed. Smooth precast and formed concrete surfaces must be cleaned, roughened and made absorptive by abrasive blasting or shotblasting. Following surface preparation, the cleaned surface should pull concrete when tested with an Elcometer or similar pull tester (ASTM D 4541). Before application of the coating, use the "Visqueen test" (ASTM D 4263) to evaluate moisture level in concrete. **New Concrete:** Allow to cure for a minimum of 28 days. (If earlier times are required, contact your local Euclid Chemical representative). Prepare surface as recommended above. **Old Concrete:** For rapid curing patching, use a mortar of FLEXOLITH and clean aggregate. If portland cement patching materials are used, allow the patch to cure for 28 days before coating. After patching, a light brush blast is recommended prior to coating.

**Mixing:** Using a low speed drill motor and a "Jiffy" type mixer, mix the Part A & B components separately for approximately 1 minute. **Binder:** Combine one part by volume of "A" with one part by volume of "B" and mix thoroughly. Scrape the bottom and sides of mixing container, at least once. Mix just enough material that can be used within the working life. Do not aerate the mix.

**Application: Broadcast Method:** Apply mixed FLEXOLITH binder to the prepared surface using roller, notched squeegee or spray equipment. Eliminate any puddles with a quick light roller pass. Immediately broadcast clean, dry aggregate to full saturation until no wet spots appear. After the binder has cured, broom or vacuum excess aggregate. Repeat the procedure to build overlay thickness. For easier cleaning an optional seal coat of FLEXOLITH may be applied. A more textured, and higher skid resistant sealed surface is obtained if FLEXOLITH LV is used as the seal coat. **Trowel down:** FLEXOLITH mortar can be applied by trowel. Neat resin should be used as a prime coat prior to application of the mortar. **Aggregate for Skid Resistant Overlay:** The recommended aggregate for heavy duty applications (high traffic bridge decks, parking deck turn lanes, etc.) is #8 or #9 Basalt, containing at least 10% aluminum oxide as supplied by Euclid Chemical. For other applications, or where specified, silica sand aggregate may be used.

## CLEAN-UP

Clean tools and application equipment immediately after use with methyl ethyl ketone or xylene. Clean spills or drips while still wet with same solvent. Dried FLEXOLITH will require mechanical abrasion for removal.

## PRECAUTIONS/LIMITATIONS

- Store at temperatures between 40°F to 90°F (4°C to 32°C).
- Protect from moisture and freezing.
- Do not aerate FLEXOLITH during mixing.
- If FLEXOLITH is to be exposed to chemicals contact EUCLID Technical Service for a suitable top coat.
- Do not store below 40°F (4°C).
- Condition FLEXOLITH at 75°F (24°C) for 24 hours prior to use.
- In all cases, consult the Material Safety Data Sheet before use.