

DURAL FAST SET EPOXY

RAPID SETTING, HIGH STRENGTH, EPOXY ADHESIVE BINDER

DESCRIPTION

DURAL FAST SET EPOXY systems are two part, 100% solids, moisture insensitive adhesives and binders for numerous application needs. This high modulus material is available in a low viscosity (LV), medium viscosity (MV) or GEL consistency. DURAL FAST SET EPOXY products are high strength, extremely fast setting (even in a thin film) adhesives and can be used at temperatures as low as 35°F (2°C).

PRIMARY APPLICATIONS

- Fast turn-around epoxy injection
- Concrete adhesive
- Anchor bolt grouting
- Sealing cracks
- Priming & sealing
- Bonding toppings
- Concrete repair
- Coating

FEATURES/BENEFITS

- Abrasion and chemical resistant coating
- Extend with aggregate for epoxy mortar
- High early strengths at normal and low ambient temperatures
- Can contribute to LEED points
- Excellent adhesive for bonding together concrete, steel, ceramic or wood materials

TECHNICAL INFORMATION

PROPERTY	DURAL FAST SET LV	DURAL FAST SET MV	DURAL FAST SET GEL
Gel Time	6-8 minutes	6-8 minutes	6-8 minutes
Viscosity	500 cps	3,000 cps	> 80,000 cps
Bond Strength	2267 psi (16 MPa)	2800 psi (19 MPa)	2998 psi (21 MPa)
Water Absorption	0.40%	0.40%	0.66%
Compressive Modulus	378,000 psi (2,606 MPa)	>300,000 psi (2,069 MPa)	302,000 psi (2,082 MPa)
Compressive Strength	10,942 psi (75 MPa)	10,521 psi (72 MPa)	10,100 psi (70 MPa)
Appearance, Mixed	Amber	Concrete Gray	Concrete Gray

REINFORCING STEEL				THREADED ROD			
Rebar Diameter	Hole Diameter	Embedment Depth	Pull-Out Strength	Rod Diameter	Hole Diameter	Embedment Depth	Pull-Out Strength
#4: 1/2" (12.7 mm)	5/8" (15.8 mm)	4.5" (11.8 cm)	14200 lb (6441 kg)	1/2" (12.7 mm)	3/4" (19.1 mm)	5" (12.7 cm)	9200 lb (8709 kg)
#4: 1/2" (12.7 mm)	5/8" (15.8 mm)	5.3" (13.5 cm)	21900 lb (9934 kg)	3/4" (19.1 mm)	1" (25.4 mm)	7.5" (19.1 cm)	46000 lb (20865 kg)
#6: 1/2" (12.7 mm)	7/8" (22.2 mm)	5.6" (14.2 cm)	31100 lb (14107 kg)	1" (25.4 mm)	1 1/8" (28.6 mm)	9.75" (24.8 cm)	76700 lb (34790 kg)
#6: 1/2" (12.7 mm)	7/8" (22.2 mm)	7.5" (19.1 cm)	46600 lb (21137 kg)	1" (25.4 mm)	1 1/4" (31.8 mm)	11" (27.9 cm)	77600 lb (35199 kg)
#8: 1/2" (12.7 mm)	1 1/8" (28.6 mm)	9" (22.9 cm)	55900 lb (25356 kg)	--	--	--	--
#8: 1/2" (12.7 mm)	1 1/8" (28.6 mm)	10" (25.4 cm)	83,900 lb (78,057 kg)	--	--	--	--

PACKAGING

LV is available in 22 oz (650 mL) dual component cartridges, 10 oz (300 mL) single cartridges, 4 gal (15.15 L) case and 10 gal (37.85 L) units.

MV is available in 1 gal (3.8 L) units.

GEL is available in 22 oz (650 mL) dual component cartridges, 10 oz (300 mL) single cartridges, 1 gal (3.8 L) units, 4 gal (15.15 L) case and 10 gal (37.85 L) units.

SHELF LIFE

2 years in original, unopened container.

SPECIFICATIONS/COMPLIANCES

All formulations meet the requirements of ASTM C 881, Type I and IV, AASHTO 235, and all are available for USDA approval in inspected facilities. All are suitable for use under ACI Specifications 503.1, 503.2, 503.3, and 503.4.



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An **rpm** Company



COVERAGE

Yield of 22 oz (650 mL) cartridges is 37 in³ (.61L). Yield of 10 oz (300 mL) cartridges is 17 in³ (.28 L)

Application ft ² /gal (m ² /L)*	LV	MV	GEL
Priming & Sealing	100 to 125 (2.5 to 3.1)	----	----
Bonding Toppings	----	50 to 100 (1.2 to 3.13)	55 to 70 (1.3 to 1.7)
Coating	----	110 to 135 (2.7 to 3.3)	----
Repair Mortars 1/4 " (6.4 mm)	20 to 24 (.49 to .54)	18 to 22 (.44 to .54)	12 to 16 (.29 to .39)

DIRECTIONS FOR USE

SURFACE PREPARATION: Concrete surfaces must be structurally sound, free of loose or deteriorated concrete and free of dust, dirt, paint, efflorescence, oil and all other contaminants. Mechanically abrade the surface. Properly clean profiled area. **Priming:** Clean and prime exposed steel using a spray or brush coat of DURAPREP AC. **Mixing: Cartridge Units:** Shake cartridge vigorously before using. Place cartridge in dispenser. Remove shipping cap and plugs. Dispense small amount until an even flow out of both sides occurs. Attach static mixing nozzle and dispense. Be sure not to tilt cartridge upwards, so that mixed epoxy flows back into tube. After dispensing, remove nozzle and properly dispose of, clean off threaded end of cartridge and replace shipping cap. **Bulk Units:** Using a low speed drill motor and a "jiffy" type paddle, premix parts A and B separately for about a minute. Combine 1 part A with 1 part B and mix well for 3 minutes until there is no streaking in the mix. If aggregate is to be added, do so immediately and blend until consistent. Apply immediately.

Application: Temperatures for DURAL FAST SET EPOXY products must be at least 35°F(2°C) and rising. **Anchor Bolt Grouting:** Before grouting, the anchor bolt must be clean & free of all debris. Prime the hole with neat DURAL FAST SET EPOXY and allow 5 minutes at 75° F (24° C) for the material to penetrate and seal the walls of the hole. Fill the hole with enough material so that when the bolt is inserted excess material will come to the surface. Push the bolt into the hole using a twisting motion to ensure there are no air voids in the hole. For additional information, consult "Anchor Bolt Grouting Guidelines" from The Euclid Chemical Company.

Pressure Grouting: Vertical Cracks: Install injection ports at appropriate intervals using DURAL FAST SET EPOXY GEL. Seal surface cracks with DURAL FAST SET EPOXY GEL. Pump DURAL FAST SET EPOXY LV starting at the bottom and working up. Cracks should be clean and dry prior to injection of the DURAL FAST SET EPOXY LV. **Horizontal Cracks:** "Vee" out cracks. Cracks must be free of all debris before filling. Pressure injection method is the same as for vertical cracks. For gravity feed, pump DURAL FAST SET EPOXY LV until cracks are filled.

Priming & Sealing: Use either LV or MV formulations in these applications. Apply material by roller 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. Note: DURAL FAST SET EPOXY is a fast setting epoxy at normal room temperatures. Arrange for quick placement of product.

Bonding: If using DURAL FAST SET EPOXY MV as a bonding agent for a cementitious topping, place the topping on the DURAL FAST SET EPOXY 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 product must be applied before the topping is placed.

Coating: If a second coat of DURAL FAST SET EPOXY MV is to be placed on the concrete, the first coat should be slightly tacky (1 to 2 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: The surface should be primed with DURAL FAST SET EPOXY LV prior to application of the repair mortar. Mix the epoxy, part A with part B prior to adding the aggregate. Trowel the mortar into place. If the surface is to rough, a topcoat of DURAL FAST SET EPOXY MV can be applied.

CLEAN-UP

Clean tools and equipment immediately following use with methyl ethyl ketone or acetone. Clean drips and over spray while still wet with the same solvent. Dried epoxy materials require mechanical abrasion for removal.

PRECAUTIONS/LIMITATIONS

- Do not apply at temperatures below 35°F (2°C).
- Do not thin with any foreign material. Do not aerate materials during mixing.
- For critical grouting applications, the concrete should be cured a minimum of 28 days.
- Store between 50°F to 90°F (10°C to 32°C).
- Protect from moisture.
- In all cases, consult the Material Safety Data Sheet before use.

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