

High Molecular Weight Methacrylate (HMWM) Crack Sealer

Sealate™

Sealate™ (T70 and T70 MX-30) is a specially formulated, high molecular weight methacrylate resin system that is highly effective for sealing and filling cracks in concrete structures.

Application Procedure

Surface Preparation: It is strongly recommended that all concrete surfaces that are to receive Sealate™ be thoroughly clean and sound. Remove all surface dirt, grease, paint, rust, and other contaminants by sandblasting, shot-blasting or mechanical abrasion. The concrete surface should be visibly dry and the moisture content in concrete should be tested according to ASTM D 4263. The temperature of the deck and air should be between 50 °F and 100 °F prior to resin application.

Mixing: The following table lists the mixing ratios of the two curing agents. Add appropriate amount of Cobalt Napthenate promoter to Sealate™ resin and stir well. Then, add the corresponding amount of CHP initiator. Stir again for about 1-2 min. If machine applied, Sealate™ should be mixed utilizing a two component resin system using promoted resin for one part and initiated resin for the other part. Mixing ratio of promoted/initiated resin should be 1:1. The mixed resin should be applied to the concrete surface within 5 minutes of complete mixing.

Sealate™ T70 / T70 MX-30	Cobalt Napthenate (ml)	CHP (ml)
1 gallon	75	150
5 gallon	375	750

Caution: Never mix CHP initiator directly with Cobalt promoter. Violent reaction will result!

Application: The rate of application of promoted/initiated resin should be approximately 100-150 square feet per gallon. However, this will vary depending on the surface, porosity, size and number of cracks present in the area being treated.

Spray equipment, if used, should be airless, generating sufficient pressure to atomize mixed resins. If hand applied, the concrete surface should be flooded with the resin, allowing sufficient time for penetration into the surface and complete filling of all cracks. Excess material should be redistributed using squeegees or brooms within 15 minutes after application. The quantity of initiated/promoted resin mixed at one time should be limited to 5 gallons for manual application.

Broadcasting of Aggregate: Broadcast sand should be applied to the entire treated area prior to cure, typically at 1-2 pounds per square yard. The sand used should be 12 x 16 mesh, #2 or #3 blasting sand, and should have a maximum moisture content no greater than 0.5%. It should be placed within 15-20 minutes of the resin application and before any setting of monomer occurs. Traffic can be restored once the treated concrete surface has cured tack-free.

Ambient Temperature (°F)	Approximate Cure Time* (hrs.)	
	Sealate™ T70	Sealate™ T70MX-30
50 F – 70 F	7 – 12 hrs.	8 - 16 hrs.
70 F – 100 F	4 – 7 hrs.	5 - 8 hrs.

* Cure times are approximate and will vary with ambient and deck temperature, humidity, and sunlight. Structure can be opened to traffic only after complete cure is achieved.

Properties*

Property	Unit of Measure		Test
	Sealate™ T70	Sealate™ T70 MX-30	
Appearance	Amber Liquid	Amber Liquid	
Viscosity	<20 cps (mPa-sec)	<25 cps (mPa-sec)	Brookfield
Density	8.5 - 9.0 lbs/gal. (1.02 - 1.08 gms/ml)	8.3 - 8.6 lbs/gal. (1.00 - 1.03 gms/ml)	ASTM D2849
Pot Life (@ 70 °F)	25-40 min	40-60 min	AASHTO T237
Tack Free Time (@ 70 °F)	4 – 7 hrs.	5 - 8 hrs.	AASHTO T237
Flash Point	>210°F (>98°C)	>200°F (>93°C)	ASTM D1310
Solids Content	100%	100%	ASTM D1644
Tensile Strength	>1600 psi (>11 MPa)	>500 psi (>3.5 MPa)	ASTM D638
PCC-SSD Bond Strength	>615 psi (>4.2 MPa)	>615 psi (>4.2 MPa)	CA Test 551
Tensile Elongation	3-5%	30%	ASTM D638
Compressive Strength (24 hrs)	>8150 psi (>56 MPa)	>3500 psi (>24 MPa)	ASTM C3986
Volatile Content (@ 1 hr.) (@ 24 hrs.)	18% (181 gms/L) <3% (30 gms/L)	18% (181 gms/L) <3% (30 gms/L)	ASTM D2369

* To be used as general guidelines only

Packaging

Sealate™ comes in 1, 5 and 55-gallon containers. The initiator, Cumene Hydroperoxide (CHP) and the Cobalt Napthenate promoter, are provided in separate labeled containers and in pre-measured quantities to make scale mixes of Sealate™.

Storage

Sealate™ should be stored in tightly sealed containers in a dry location and at normal room temperatures (50°F - 85°F). The initiator, Cumene Hydroperoxide (CHP) and the Cobalt Napthenate promoter, are provided in separate labeled containers, and should be stored in a cool shaded area separately from each other and away from the monomer.

Caution

Direct contact with Sealate™ T70 or T70 MX-30 may produce minor skin irritations to persons prone to such reactions. It is recommended that all persons involved in mixing and application wear protective clothing such as goggles, rubber boots, and rubber gloves. As with all chemicals, read MSDS prior to use.

Warranty

The following warranty is made in lieu of all other warranties, either expressed or implied. This product is manufactured of selected raw materials by skilled technicians. Neither seller nor manufacturer has any knowledge or control concerning the purchaser's use of either product and no warranty is made as to the results of any use. The only obligation of either seller or manufacturer shall be to replace any quantity of this product that proves to be defective. Neither seller nor manufacturer assumes any liability for injury, loss or damage resulting from use of this product.

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