

Technical Data Sheet

High Molecular Weight Methacrylate (HMWM) Crack Sealer T-70-10

T-70-10 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 required that all concrete surfaces that are to receive T-70-10 be thoroughly clean and sound. Remove all surface dirt, grease, paint, rust, and other contaminants by sand blasting or shot blasting. Applications on LMC overlays do not require blasting or mechanical abrasion, the surface can be high pressure washed to remove contamination. Before application moisture content shall be confirmed using a non-destructive concrete moisture meter and shall not exceed 6%. The ambient temperature should be between 50°F and 100°F prior to resin application.

Mixing: Table 1 lists the mixing ratios of the two curing agents. Add the appropriate amount of Cobalt Napthenate promoter to T-70-10 resin and mix well. Then add the corresponding amount of CHP initiator, stir again for approximately one to two minutes. If mechanically applied, the resin 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 five minutes of complete mixing.

Table 1: Mixing Instructions for T-70-10, Cobalt Napthenate and CHP

T-70-10 (gal)	Cobalt Napthenate (mL)	CHP (mL)
1	75	150
5	375	750

CAUTION: Never mix CHP initiator with Cobalt promoter. A violent reaction will result!

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

During application, 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 five gallons.

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 a clean and dry quartz, sieve size 12-20 or similar. It should be placed within 15 minutes of the resin application and before any setting of the sealer occurs. Traffic can be restored once the concrete surface is cured tack-free. Refer to Table 2 for temperature restrictions and cure times.

Table 2: Cure Times for T-70-10

Ambient Temperature (°F)	Approximate Cure Time (hr)
50 – 70	7 – 12
70 – 100	4 – 7

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

Table 3: Properties* of T-70-10

Property	Results	Test Method
Viscosity	15 – 25 cps	ASTM D2556
Density	8.6 lb/gal	ASTM D1475
Gel Time/Pot Life @ 70°F	35 – 40 min	AASHTO T237
Tack Free Time @ 70°F	4 – 7 hr	AASHTO T237
Solids Content	100%	ASTM D1644
Tensile Strength	1,600 psi	ASTM D638 Type I
PCC-SSD Bond Strength	>615 psi	CA Test 551
Tensile Elongation	1 – 5%	ASTM D638 Type I
Volatile Content	30% max	ASTM D2369
Slant Shear Bond Strength	>1,500 psi	ASTM C882
Vapor Pressure @ 77°F	0.62 mm Hg	ASTM D323 Reid Method

*The value ranges stated in this Technical Data Sheet are based on system processing under laboratory conditions. Equipment configurations and/or field application conditions may produce variances in final system values.

Packaging

T-70-10 comes in one, five and fifty-five 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 T-70-10.

Storage

T-70-10 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 as well as away from the resin.

Caution

Direct contact with T-70-10 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 SDS 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 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.