

T-17 CW MMA POLYMER CONCRETE

Transpo T-17 CW is a 100% reactive, rapid setting, solvent-free methyl methacrylate (MMA) polymer concrete system that can be used as a repair for partial or full depth patching, grouting, and structural applications.

This system is to be used on horizontal concrete surfaces, on grade, above and below grade.

T-17 CW is a three-component system including a low viscosity methyl methacrylate (MMA) resin, a prepackaged blend of sand, inert fillers and initiators as well as an optional cold weather additive for applications below -7°C / 20°F. T-17 CW is not recommended for use above 0°C / 32°F. The material can be applied at a minimum ½ inch / 13 mm thickness. For deeper patching, T-17 CW should be extended with a specific aggregate.

APPLICATION

Surface Preparation

All surfaces that are to receive T-17 CW must be thoroughly clean, dry and free of all dirt, grease, rust and other contaminants that might interfere with the proper adhesion of the polymer concrete. All damaged or deteriorated concrete shall be removed and cut back to sound concrete.

Priming

Concrete surfaces are primed with T-41s MMA primer using either rollers or brushes at a rate of 80 ft²/gal. For other substrates, contact a Transpo representative. The primer is mixed with an appropriate amount of BPO catalyst as shown in Table 1. The primer coat must be allowed to cure tack-free before application of the patching material.

Table 1: Mixing Instructions for T-41s Primer

Ambient Temperature	No. of 30 g Bags of BPO per Gal of T41-s	% of BPO by Weight of Resin
-10°C – 2°C / 14°F – 35°F	6	6

Mixing

A rotary drum mortar mixer, or similar, is to be used for mixing. The inside of the mixer should be clean and dry. Prior to mixing, the mixer should be pre-wet with a gallon / approx. 4 liters of T-17 liquid. If using the cold weather additive, it is to be premixed into the T-17 liquid prior to adding the liquid to the mixer. Add appropriate amount of Transpo T-17 liquid to the mixer, the Transpo T-17 CW powder component, and mix until uniform consistency.

Next, add the specified aggregate and re-mix for another minute. The amount of aggregate and resin added per bag of Transpo T-17 CW powder depends on the depth of the application. Refer to Table 2 for suggested mix ratios.

Table 2: Mixing Instructions for T-17 CW per 22.7 kg / 50 lb bag of T-17 CW Powder.

Depth of Application	Aggregate Size	Amount of Aggregate	T-17 Liquid, 30 g Bags of BPO per Gal of Primer ST	Yield
50 mm / 2 in and above	19 – 10 mm / 3/4 – 3/8 in	22.7 kg / 50 lb	3.3 L / 0.875 gal	.020 m ³ / 0.72 ft ³
25 – 50 mm / 1 – 2 in	10 – 5 mm / 3/8 – 3/16 in	11.4 g / 25 lb	2.8 L / 0.75 gal	.016 m ³ / 0.56 ft ³
13 – 25 mm / ½ – 1 in	–	–	2.4 L / 0.625 gal	.011 m ³ / 0.40 ft ³

FINISHING

Typical concrete finishing tools can be used to place and finish T-17 CW polymer concrete. Steel trowels, floats, or screeds can be used to obtain a “closed” surface. Pencil vibrators may be used if the pour is over six inches thick or reinforcing steel clearance is less than or equal to the size of the coarse aggregate in the T-17 mix. Do not overwork the materials. Tining or broom finishing is not recommended.

PACKAGING

Transpo T-17 CW components are packaged as follows:

Powder: 22.7 kg / 50-pound bags

Aggregate: 22.7 kg / 50-pound bags

Cold Weather Additive: 10 mL / .34 oz bottles

Liquid:

T-17 Liquid	Drum	Pail
Gross Weight	207 kg / 457 lb	19.3 kg / 42.6 lb
Net Weight	190 kg / 420 lb	17.2 kg / 38 lb
Nominal Volume	204.8 L / 54.1 gal	18.5 L / 4.9 gal

PROPERTIES*

Table 3: T-17 CW Mortar (No Extension)

Property	Unit of Measure	Test
Flexural Strength, 3 hours	>1,800 psi	ASTM D790
Tensile Strength, 3 hours	>1,000 psi	ASTM D638 Type I
Tensile Adhesion (pull-off concrete)	>250 psi	ASTM C1583

Compressive Strength, per ASTM C579

Time	Temperature			
	-25°C / -13°F**	-10°C / -14°F**	5°C / -41°F**	23°C / -74°F**
1 hour	–	–	–	20 MPa / 2,900 psi
2 hours	–	10 MPa / 1,500 psi	–	35 MPa / 5,000 psi
4 hours	–	15 MPa / 2,200 psi	27 MPa / 3,900 psi	48 MPa / 7,000 psi
8 hours	–	21 MPa / 3,000 psi	41 MPa / 6,000 psi	55 MPa / 8,000 psi

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

**Specimens prepared using cold weather additive.

***With cold weather additive.

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.

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

To be used as general guidelines only.

The base language for this technical data sheet is English.

1 day	41 MPa / 6,000 psi	34 MPa / 4,900 psi	55 MPa / 8,000 psi	62 MPa / 9,000 psi
3 days	48 MPa / 7,000 psi	48 MPa / 7,000 psi	62 MPa / 9,000 psi	62 MPa / 9,000 psi

WORKING TIME

Temperature	Working Time	Gel Time
23°C / 74°F	15 min	28 min
5°C / 41°F	30 min	35 min
-10°C / 14°F ***	40 min	50 min
-25°C / -13°F ***	50 min	60 min

STORAGE

The liquid and powder components can be stored for up to 12 months in original, unopened containers in a cool, dry area at temperatures less than 30°C / 86°F.

CAUTION

The uncured liquid component is flammable. All appropriate precautions should be taken. After curing, it will not support combustion. It is recommended that all persons involved in mixing and application wear protective clothing such as goggles, rubber boots, rubber gloves. As with all chemicals, read SDS prior to use.