



## DATA SHEET NO. 3300-397

### POLY-GRIP™ Fast-Curing Acrylic Adhesive

#### DESCRIPTION

POLY-GRIP is a two-component, styrene-free, acrylic system used for anchoring and doweling applications in uncracked concrete using threaded rod and rebar. The product may be used in temperatures between -9° C - 35° C.

#### USES

POLY-GRIP is used for adhering dowel bars and tie bars for full-depth concrete repairs. The product also provides short-term tensile anchoring and shear loading conditions in accordance with allowable stress design (ASD). It features a wide service temperature range between -40° - 80° C. POLY-GRIP is moisture-insensitive, allowing installation and curing in damp water-saturated environments. The product can also be used as a bonding agent for fresh concrete to hardened concrete and hardened to hardened concrete.

#### FEATURES/BENEFITS

- Provides ultra-fast 30-minute full-cure time at 25° C in dry concrete.
- Provides high bond strength with fast cure times.
- Product is easily dispensable, even at low temperatures.
- Styrene-free.
- Non-sag

#### PACKAGING

0.83 Litre (28 U.S. Fluid Oz.) Cartridge (8/Carton)

#### SHELF LIFE

One year from date of manufacture when stored indoors on pallets in a dry, cool area. Do not store product outside.

#### TECHNICAL DATA - performance to ASTM C881<sup>1,2,3</sup>

Property	Cure Time	ASTM Standard	Units	Sample Conditioning Temperature		
				-10°	10° C	35° C
Gel Time – 60 Gram Mass <sup>4</sup>	N/A	C881	Minutes	50	10	4
Compressive Yield Strength	7 day	D695	MPa	40.9	38.8	23.8
			PSI	5930	5630	3450
Compressive Modulus	7 day		MPa	2,464	1,882	1,891
			PSI	357,300	273,000	274,200
Bond Strength Hardened to Hardened Concrete	2 Day	C882	MPa	21.0	21.0	17.1
			PSI	3050	3020	2480
Bond Strength Hardened to Hardened Concrete	14 Days	C882	MPa	22.1	21.0	21.3
			PSI	3210	3040	3090
Bond Strength Fresh Concrete to Hardened Concrete	14 Days	C882	MPa	14.6		
			PSI	2120		
Consistency or Viscosity	N/A	C881	N/A	Non-Sag		
Heat Deflection Temperature	7 day	D648	C	62.8		
Water Absorption	14 Day	C570	%	0.42		
Linear Coefficient of Shrinkage	48 hr	D2566	%	0.014		

1. Results based on testing conducted on a representative lot of product. Average results will vary according to the tolerances of the given property.
2. Full cure time is listed above to obtain the given properties for each product characteristic.
3. Results may vary due to environmental factors such as temperature, moisture, and type of substrate.
4. Gel time may be lower than the minimum required for ASTM C881

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## APPLICATION

**Surface Preparation ...** Using a rotary hammer drill and a bit which conforms to ANSI B212.15 and is the appropriate size for the anchor diameter to be installed, drill the hole to the specified embedment depth.

Remove standing water from hole prior to beginning the cleaning process. Using oil-free compressed air with a minimum pressure of .55 MPa (80 psi), insert the air wand to the bottom of the drilled hole and blow out the debris with an up/down motion for a minimum of four seconds/cycles (4X).

Use a brush that is long enough to reach the bottom of the drilled hole. Reaching the bottom of the hole, brush in an up/down and twisting motion for four cycles (4X). The brush should contact the walls of the hole. If it does not, the brush is either too worn or small and should be replaced with a new brush of the correct diameter.

Blow the hole out once more to remove brush debris using oil-free compressed air with a minimum pressure of .55 MPa (80 psi). Insert the air wand to the bottom of the drilled hole and blow out debris with an up/down motion for a minimum of four seconds/cycles (4X). Visually inspect the hole to confirm it is clean. NOTE: If installation will be delayed for any reason, cover cleaned holes to prevent contamination.

**Mixing ...** Remove the protective cap from the adhesive cartridge and insert the cartridge into the dispensing tool. Before attaching mixing nozzle, balance the cartridge by dispensing a small amount of material until both components are flowing evenly. For a cleaner environment, hand mix the two components and let cure prior to disposal in accordance with local regulations.

After the cartridge has been balanced, screw on the proper mixing nozzle to the cartridge. Do not modify mixing nozzle and confirm that internal mixing element is in place prior to dispensing adhesive. Take note of the air and base material temperatures and review the working/full cure time prior to starting the injection process.

Dispense the initial amount of material from the mixing nozzle onto a disposable surface until the product is a uniform gray color with no streaks, as adhesive must be properly mixed in order to perform as published. Dispose of the initial amount of adhesive according to local regulations prior to injection into the drill hole. CAUTION: When changing cartridges, never reuse nozzles. A new nozzle should be used with each new cartridge.

**Application Method ...** Insert the mixing nozzle to the bottom of the hole and fill from the bottom to the top approximately two-thirds full, being careful not to withdraw the nozzle too quickly as this may trap air in the adhesive. NOTE: When using a pneumatic dispensing tool, ensure that pressure is set at .62 MPa (90 psi) maximum.

Prior to inserting the threaded rod or rebar into the hole, make sure it is clean and free of oil and dirt and that the necessary embedment depth is marked on the anchor element. Insert the anchor element into the hole while turning 1 - 2 rotations prior to the anchor reaching the bottom of the hole. Excess adhesive should be visible on all sides of the fully installed anchor. **CAUTION:** Use extra care with deep embedment or high temperature installations to ensure that the working time has not elapsed prior to the anchor being fully installed.

Do not disturb, torque, or apply any load to the installed anchor until the specified full cure time has passed. The amount of time needed to reach full cure is base material temperature dependent.

## PRECAUTIONS

Do not thin with solvents, as this will prevent cure. For anchoring applications, concrete should be a minimum of 21 days old prior to anchor installation. Not recommended for any application where there may be a sustained tensile load, including overhead applications.

## MASTERFORMAT NUMBER AND TITLE

03 01 00 - Maintenance of Concrete

## LEED INFORMATION

May help contribute to LEED credits:

- MRC9: Construction and Demolition Waste Management
- EQc2: Low-Emitting Materials [For Healthcare and Schools (exterior-applied products) ONLY]

For most recent data sheet, further LEED information, and SDS, visit [www.wrmeadows.com](http://www.wrmeadows.com)

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**TABLE 1: POLY-GRIP CURE SCHEDULE** <sup>1,2</sup>

Base Material Temperature Range	Working Time	Full Cure Time - Dry Concrete	Full Cure Time - Damp Concrete
°C			
-9	50 min	4 hr	8 hr
-5	40 min	3 hr	6 hr
5	20 min	90 min	3 hr
15	9 min	60 min	2 hr
25	5 min	30 min	60 min
35	3 mins	20 min	40 min

1. Working and full cure times are approximate, may be linearly interpolated between listed temperatures and are based on cartridge/nozzle system performance.
2. Application Temperature: Substrate temperature should be from -9 - 35° C.
3. When ambient or base material temperature falls below -5° C, condition the adhesive above 20° C prior to use.

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