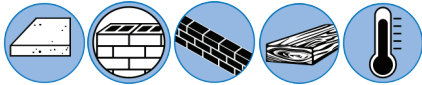


MIRACLE BOND® 1310



Product Description

MIRACLE BOND® 1310 is a multi-purpose, rapid cure, epoxy bonding and repair adhesive. Its specially formulated, non-sag property is ideal for bonding most materials together and is perfect for both overhead and vertical repairs, while still easily dispensed from most caulking guns. It has an application temperature range between 40 °F (4 °C) and 100 °F (38 °C).

General Uses & Applications

- Ideal bonding agent for most materials including concrete, brick, wood, stone, block and other substrates
- May be used as an adhesive or filler
- Capping paste and injection port adhesive for crack injection process
- Non-sag patching material for cracks and small spalls
- Ideal for overhead and vertical repairs
- Adhering replacement tile to surface of pool underwater by applying adhesive to dry tile and holding in place until initial tack

Advantages & Features

- Easily dispensable from most caulking guns
- Rapid initial 3 hour cure at room temperature
- Moisture insensitive system and may be used on damp surfaces

Availability: Adhesives Technology Corp. (ATC) products are available through select distributors providing you with all your construction needs. Please contact ATC for a distributor near you or visit our website at www.atcepoxy.com to search by zip code.

Color & Ratio: Part A (Resin): White, Part B (Hardener): Dark Gray, Mixed: Concrete Gray. Mix Ratio: 1:1 by volume.

Storage & Shelf Life: For best results, store between 40 °F (4 °C) and 90 °F (32 °C). Shelf life is 24 months when stored in unopened containers in dry conditions.

Installation: See Manufacturer's Printed Installation Instructions (MPII) available within this Technical Data Sheet (TDS). Due to occasional updates and revisions, always verify that you are using the most current version of the MPII. In order to achieve maximum results, proper installation is imperative.

Clean Up: Always wear appropriate protective equipment such as safety glasses and gloves. Clean uncured materials from tools and equipment with mild solvent. Cured material can only be removed mechanically.

Limitations & Warnings:

- Product may discolor from UV exposure
- Once cured it can be coated or painted to meet desired appearance; see MPII
- New concrete should be a minimum of 28 days old prior to crack repair
- Do not thin with solvents, as this will prevent cure
- NOT intended for repairing cracks subject to movement, so repairs should be made to the cracked member to eliminate the cause of the cracking prior to usage
- Product may sag when dispensing underwater into vertical cracks or spalls
- Adhesive in cartridge is fully dispensed when plunger reaches halfway

Safety: Please refer to the Safety Data Sheet (SDS) for MIRACLE BOND 1310 published on our website or call ATC for more information at 1-800-892-1880.

Specification: The repair adhesive system shall be a two component epoxy bonding adhesive agent. When cured 7 days and at a temperature of 75 °F (24 °C), the adhesive shall have a 7 day peak compressive strength of 6,120 psi (42.2 MPa) per ASTM D695. Material shall be MIRACLE BOND 1310 from Adhesives Technology Corp., Pompano Beach, Florida.

ORDERING INFORMATION

TABLE 1: MIRACLE BOND 1310 Adhesive Packaging

Package Size	8.6 oz. (254 ml) Cartridge
Part #	A9-MB131012P
Manual Dispensing Tool	TM9HD
Case Qty.	12
Pallet Qty.	1,116
Pallet Weight (lbs.)	1,178
Recommended Mixing Nozzle	T12



MATERIAL SPECIFICATION

TABLE 2: MIRACLE BOND 1310 performance to ASTM C881-14^{1,2,3}

Property	Cure Time	ASTM Standard	Units	Sample Conditioning Temperature
				75 °F (24) °C
Gel Time - 60 Gram Mass	----	C881	min	14
Tack Free Cure Time ⁴ (30 mil Thin Film)	----	D2377	hr	3
Working Time (Nozzle) ⁴	----	----	min	30
Peak Compressive Strength ⁴	7 day	D695	psi (MPa)	6,120 (42.2)
Compressive Modulus			psi (MPa)	106,400 (733.6)
Bond Strength Hardened to Hardened Concrete	2 day	C882	psi (MPa)	1,230 (8.5)
	14 day		psi (MPa)	1,640 (11.3)
Bond Strength Plastic to Hardened Concrete	14 day		psi (MPa)	900 (6.2)
Consistency or Viscosity	----	C881	----	Non-sag
Water Absorption	14 day	D570	%	0.41
Linear Coefficient of Shrinkage	----	D2566	%	0.00015

1. Results based on testing conducted on a representative lot(s) of product. Average results will vary according to the tolerances of the given property.

2. Full cure 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. Property not referenced in ASTM C881.



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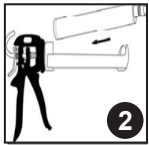
INSTALLATION INSTRUCTIONS (MPII)

Surface Preparation

Surface preparation will be dependent upon the application for the product. Old concrete must be clean and profiled or textured. New concrete should be a minimum of 28 days old. Prepare the surface by rough-grinding, scarifying, bush hammering or by using other equipment that will give a roughened profile. A roughened surface is imperative for good adhesion. Always be sure the bonding surfaces are prepared in advance before starting a new cartridge or mixing product. If at all possible, schedule dispensing to consume an entire cartridge at one time with no interruption of epoxy flow.

Cartridge Preparation

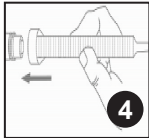
Remove plastic cap and plug from threaded end of cartridge.



Place cartridge into standard caulking gun.



CAUTION: Check the expiration date on the cartridge to ensure it is not expired. **Do not use expired product!** Before attaching the nozzle dispense enough material into a disposable container until both resin and hardener flow evenly.



Attach mixing nozzle to cartridge and dispense a small amount of material into same waste container until a consistent color with no streaks is obtained.

Spall Repair Preparation

- **WARNING:** Use **MIRACLE BOND 1310 Easy Flow** for **SMALL SPALL REPAIRS ONLY**. A deeper or larger mass than recommended will generate excessive heat and may result in smoking, cracking and the material rising
- Always keep nozzle submerged in the adhesive while filling the spall to avoid entrapping air into the repair
- **NOTE:** For larger spalls use slower curing MIRACLE BOND 1450
- For MIRACLE BOND 1310, the spall should be ground to a maximum 1 in. (25 mm) depth and width no greater than 5 in. (127 mm) for repairs placed at 77 °F (25 °C) - spall size may need to be reduced at elevated temperatures
- Avoid a feathered edge by cutting around the spall into sound concrete with a grinder or circular saw using a diamond or concrete abrasive blade so the entire depth of the spall is consistent
- For patching concrete or wood surfaces, fill the void with MIRACLE BOND 1310 to just above the surface level and trowel flush

Capping Ports for Structural Crack Repair

- Place and secure injection ports, or port bases, with the MIRACLE BOND capping paste taking care not to leave any pinholes, noting that the port spacing should be approximately 6 - 12 in. (152 – 305 mm) apart
- **NOTE:** **Do not allow the epoxy to block the passage between the port and the crack face**
- Place additional MIRACLE BOND between the ports making sure the entire crack is sealed off anywhere it is visible and accessible and make sure the ports are securely fastened to the concrete so they will not leak when injected under pressure
- Allow the MIRACLE BOND to cure before injecting the crack with an ATC crack injection adhesive such as CRACKBOND LR-321
- **NOTE:** Low temperatures will increase cure time, higher temperatures will decrease cure time



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