

1. Product Name

Ultrabond 2100 Multi Purpose
Medium Viscosity Bonding System

2. Manufacturer

Adhesives Technology Corp.
450 East Copans Road
Pompano Beach, FL 33064
(800) 892-1880 or (954) 782-2221
Fax: (800) 362-3320
E-mail: info@atc.ws
Web Address: www.atc.ws

3. Product Description

GENERAL DESCRIPTION

Ultrabond 2100 is a two component, 100% solids, high strength epoxy bonding adhesive. It is a solvent free, self leveling, high modulus, moisture insensitive, medium viscosity epoxy system. **Ultrabond 2100** is ideal for use in temperatures ranging from 40°F - 110°F.

Quick Selection Guide	
Coverage (BUG-unit)	64 ft ² (smooth surface)
Coverage (1 gallon)	80 ft ² (smooth surface)
Gel-Time (75°F.)	37 minutes
Minimum Load Time (bolt-up time)	10 hours
Application Temperature Range	40° F. – 110° F.

BASIC USE

Ultrabond 2100 is ideal for use as a bonding agent for fresh/plastic concrete to hardened concrete and other substrates. Acceptable uses for **Ultrabond 2100** include anchor installations where dynamic, vibratory or intermittent loads exist. **Ultrabond 2100** has not been tested and is not recommended for use in overhead applications or applications that have long term sustained loads at elevated temperatures. Additional uses include indoor projects that require a pourable self-leveling epoxy with a long working time.

APPLICATIONS INCLUDE:

- Bonding fresh concrete to hardened concrete
- Bonding hardened concrete to hardened concrete
- Mortar Repair Material (when mixed with dry silica sand)
- Self leveling spall and patching material
- Gravity feed crack repairs

COLOR

"A" Component (resin): White
"B" Component (hardener): Black/dark gray
Mixed: Concrete Gray

SOLIDS: Weight: 100% Volume: 100%

SHELF LIFE: 24 Months

STORAGE: Store in unopened containers at 55°F – 80°F.

APPLICATION: Product should be conditioned to 65°F prior to use

SIZE/PACKAGING

Ultrabond 2100 is available in:

Bulk Unit Gallon (102 fl oz.); part number: BUG-2100
2 Gallon kit; part number: B2G-2100
10 Gallon kit; part number: B10GM-2100
100 Gallon kit; part number: B100G-2100

4. Technical Data

APPLICABLE STANDARDS – Meets American Society of Testing Materials – ASTM C881, Type I, II, IV & V, Grade 2, Class B & C

Technical Data		
Properties	ASTM	Results
Compressive Strength 48° / 65°F (7 days)	D695	10,030 psi / 10,100 psi
Compressive Modulus 48° / 65°F (7 days)	D695	200,420 psi / 201,190 psi
Tensile Strength - 48°F / 65°F (7 days)	D638	7,080 psi / 7,210 psi
Elongation at Break -48°F / 65°F	D638	1.4% / 1.9%
Bond Strength @ 2 days	C882	1,130 psi
Bond Strength @ 14 days	C882	1,690 psi
Heat Deflection Temperature	D648	135° F
Viscosity	D2393	3,600 cps
Water Absorption – 24 hours @ 77°F.	D570	0.42%
Linear Coefficient of Shrinkage	D2566	.003 cm/cm
Ultimate / Allowable Tension Load #7 Rebar, 1-inch hole diameter embedded 9" into 4,000 psi concrete	E488	Ultimate 50,000 lbs. Allowable 12,500 lbs.

Ultrabond 2100 is approved for use by the following DOT's:
Alabama, Florida, Georgia, Indiana, Iowa, Kentucky, Massachusetts,
Nebraska, Pennsylvania, Tennessee, Texas and Utah.

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5. Installation

Note: component "A" contains epoxy resin and is an irritant / sensitizer; component "B" contains amines and is a corrosive / sensitizer; prior to using the Ultrabond epoxy product, please consult the material safety data sheet for proper handling instructions.

I. Surface Preparation:

Concrete and Steel: Surfaces must be sound and cleaned so there is no dust, dirt, grease, wax, oil or any other contaminants. Surfaces may be damp (or dry) however there should be no standing water. Surfaces may be prepared by shot blasting or other equivalent mechanical means.

II. Mixing Instructions:

Condition Epoxy material to at least 65F prior to usage. Thoroughly stir each component separately before mixing them together.

BUG packaging (102 fluid oz kit): Pour the contents of the "B" component pail (hardener) into the "A" component pail (resin).

B2G, B10G & B100G packaging: Mix only the amount of material that can be used before the pot life expires. Proportion equal parts by volume of both component "A" and component "B" into a clean pail. Be sure that components are mixed at an exact 1:1 ratio by volume.

Mix thoroughly with a low speed drill (400 – 600 rpm) with a mix paddle attachment (i.e. a jiffy mixer). Carefully scrape the sides and the bottom of the container while mixing. Keep the paddle below the surface of the material to avoid entrapping air. Proper mixing will take at least 3 minutes and when well mixed the material will be free of streaks or lumps.

III. Application:

Bonding fresh concrete to hardened concrete: Using a brush, roller or airless sprayer, apply an even coat of the mixed Ultrabond epoxy to the clean and prepared concrete surface. While the epoxy is still tacky, place fresh concrete over the top of the mixed epoxy.

Bonding hardened concrete to hardened concrete: Using a brush, roller or airless sprayer, apply an even coat of the mixed Ultrabond epoxy to both concrete surfaces and be sure to fill all gaps between the mating concrete surfaces. Note concrete surfaces must be cleaned prior to bonding application.

Repair Mortar: Mix with an oven dried silica sand to create an epoxy mortar grout. Silica sand should be a 20/30 – 20/40 mixture. Mix ratio is 3:1 by loose volume (sand to epoxy) to create a non-sag repair grout. To make repairs, saw-cut repair area's, then prime the surface of the repair area with mixed Ultrabond 2100 (neat resin only). Apply the mixed repair grout (Ultrabond 2100 mixed with sand) to the primed repair area. Smooth out with a trowel to create a nice smooth even surface. Volume of sand can be reduced to create a self leveling repair grout.

Vertical Anchoring: Drill hole into concrete (1/16" – 1/4" diameter larger than the threaded rod or rebar). Typical embedment depth is 9 – 15 bar diameters (9D - 15D). Fill the anchor hole to about 2/3 full with the Ultrabond epoxy. While the epoxy is still wet, place the threaded rod or rebar into the anchor hole while turning clockwise. Do not disturb or bolt-up until minimum bolt up time has passed.

Gravity Feed Crack Injection (medium sized cracks): Pour mixed Ultrabond epoxy into a prepared v-notched crack. Continue adding the epoxy until the crack is completely filled.

Sample Specification – Bonding adhesive shall be a two component, 1:1 ratio, self leveling, 100% solids, epoxy system supplied in pre-measured containers. The adhesive material must have a minimum gel-time of 30 minutes, a minimum tensile strength of 7,210 psi (at 65°F.) and a minimum compressive strength of 10,000 psi. Epoxy must meet the requirements of ASTM C881 specification for Type I, II, IV & V, Grade 2, Class B and C. Epoxy must have a minimum heat deflection temperature of 135°F (57°C) per ASTM D648. Shelf life must be a minimum of two years. Adhesive shall be **Ultrabond 2100** manufactured by Adhesives Technology Corp., Pompano Beach, Florida.

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BUILDING CODES

Installation of Ultrabond epoxy must comply with applicable local, state and national code requirements

SITE CONDITIONS

Material shall be delivered in original unopened containers and stored in a dry environment at a temperature between 40° and 90°F.

PRECAUTIONS

- Wear safety glasses
- Avoid prolonged contact with skin.
- Keep out of reach of children
- Do not take internally
- If Ingested seek medical attention immediately.
- Eye contact. Flush with water for at least 15 minutes. Call a physician immediately.

6. Availability and Cost

AVAILABILITY

Ultrabond epoxy is available through select distributors who can provide you with all of your construction needs. Please contact Adhesives Technology Corp. at (800) 892-1880 for a distributor near you.

COST

Cost information is available from your local distributor.

7. Warranty

All warranties of the product listed herein, in the corresponding ATC catalog, and in any other current literature, expressed or implied, including warranties of merchantability and fitness for a particular purpose are specifically and expressly excluded, with the following exception: At its sole discretion, ATC will repair or replace any product which it considers to be defective in material or workmanship, excepting normal wear and tear within sixty (60) days from the date of purchase from ATC. ATC shall not be liable for any injury, loss or damage, direct, indirect, incidental or consequential or arising out of use of, misuse of, negligence, accident or inability to use any ATC product.

8. Technical Services

For technical support contact Adhesives Technology Corp. at (800) 892-1880.

9. Maintenance

None required.

10. Filing System

Additional product information and specifications are available either on line at www.atc.ws or contact Adhesives Technology at (800) 892-1880 to get copies mailed to you.

Actual user performance and data may differ due to variations of base material, installation procedures and personnel, weather conditions and other factors. Adhesives Technology Corp. reserves the right to change specifications or information printed in this Tech Data Sheet without notice or liability for these changes. Adhesives Technology Corp. will not be liable for any claim based on the use of data or other information printed in this Tech Data Sheet.

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