

**DESCRIPTION** Ultrabond 2300 is a high strength, non-sag, structural epoxy anchoring system. It is multipurpose as an adhesive bonding agent. For use in temperatures between 60°F and 110°F

**PROPERTIES** Tension Load: (3000 psi concrete, 1/2" rod): 14,500 lbs.  
Gel Time: 32 minutes @ 75°F  
Load Time: 10 hours @ 75°F

COLOR	
Part A	Beige
Part B	Dark Gray
Mixed	Concrete Gray
Mix Ratio	1 : 1

### GENERAL USES and APPLICATIONS

- ❖ Bonding fresh concrete to hardened concrete or hardened concrete to hardened concrete
- ❖ Anchoring threaded rod and rebar doweling where dynamic, vibratory or intermittent loads exist
- ❖ Also used in hollow block, brick, clay and stone.

### ADVANTAGES and FEATURES

- ❖ Non-sag, high strength structural epoxy gel system with long working time
- ❖ 100% solids, solvent free system with low VOC content
- ❖ Moisture insensitive and can be used in damp environments

### PACKAGING

Cartridge or Bulk	Part #'s
22 oz. cartridge	A22-2300
1 gallon kit (102 fl. oz.)	BUG-2300
2 gallon kit	B2G-2300

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

**WEBSITE** [www.ATC.ws](http://www.ATC.ws)

**SHELF LIFE / STORAGE** 24 month shelf life when stored in unopened containers in dry conditions. Store between 40°F and 95°F.

Independent ASTM C881 Technical Data					
Properties		ASTM	65°F	75°F	95°F
Gel time 60 gram sample	minutes	C881	---	32	---
Working Time	minutes		45	40	15
Load Time--when load can be applied	hours		24	10	9
Pot Life (bulk only) 1 gallon	minutes		---	30	---
Compressive Yield Strength - psi	7 day	D695	---	10,220	---
Compressive Modulus - psi		D695	---	213,000	---
Tensile Strength psi		D638	---	3,680	---
Tensile Elongation - %		D638	---	4.6	---
Bond Strength - psi	2 day	C882	---	3,600	---
Bond Strength - psi	14 day	C882	---	4,060	---
Consistency or Viscosity		C881	Non-sag (145,000 cp)		
Heat Deflection Temp		D648	121		
Water Absorption - %		D570	0.41		
Linear Coefficient of Shrinkage %		D2566	0.002		
Volatile Organic Compound (VOC)			5.8 g/l		

### STANDARDS and APPROVALS

**ASTM C881-10 Type I, II, IV & V  
Grade 3 Class C  
AASHTO M235**

**D.O.T Approvals:** Arizona•Colorado•Florida  
Indiana•Iowa•Kentucky•Louisiana•Nebraska  
New Mexico•Tennessee•Texas•Utah

**LEED:** Certificate is available upon request

*Manufactured In The U.S.A.*  *by Adhesives Technology Corp.*

450 East Copans Road ■ Pompano Beach, FL 33064 ■ (800) 892-1880 ■ Fax (800) 362-3320 ■ [www.atc.ws](http://www.atc.ws)

**APPLICATION TEMPERATURE** Substrate and ambient air temperature between 60°F and 110°F

**CONDITION PRODUCT** When the work environment or substrate falls below 70°F, condition the product to 70-75°F prior to use. Cold product may become too thick, product that is too warm will react much faster than normal.

**COVERAGE** A 22 oz cartridge will fill 72 holes (1/2" rod x 9/16" hole x 4-1/2" embedment). See Installation Instructions.

**CHEMICAL RESISTANCE** A Chemical Resistance Chart for our Ultrabond, Miraclebond and Crackbond products is available upon request. Contact a Technical Service Representative for details.

#### LIMITATIONS & WARNINGS

- ❖ Do not thin with solvents, as this will prevent cure
- ❖ Not recommended for overhead applications or long term sustained loads at elevated temperatures

**SPECIFICATION** Adhesive shall be a two component, 1:1 ratio, high viscosity, 100% solids, epoxy system supplied in pre-measured containers. The adhesive material must have a minimum gel-time of 25 minutes, a minimum compressive strength of 10,200 psi (at 75°F.) and a minimum load strength of 14,500 lbs (1/2-inch A193-B7 threaded rod; embedded 4-1/2-inches into 3,000 psi concrete). Epoxy must have a minimum heat deflection temperature of 120°F per ASTM D648. Adhesive shall be Ultrabond 2300 manufactured by ATC, Pompano Beach, Florida.

**MPII—MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS** For complete Installation Instructions for Ultrabond 2300 refer to our Website, [www.atc.ws](http://www.atc.ws) or call ATC for more information at 1-800-892-1880.

**SURFACE PREPARATION** Old concrete must be clean and profiled or textured. New concrete must be a minimum of 28 days old. All dirt, oil, debris, wax, grease or dust must be removed. Prepare the surface mechanically using a scarifier, shotblast, bushhammer or other equipment that will give the surface profile needed for the application. A roughened surface is imperative to good adhesion.

**HOLE PREPARATION for Anchoring and Doweling** New concrete must be a minimum of 28 days old. Holes must be drilled to proper depth and diameter and brushed as per installation instructions and blown free of all dirt and dust. All contaminants such as oil, wax or grease must be removed from holes. Surface may be damp without the presence of standing water.

**CLEAN UP** Clean tools and equipment with solvent such as xylene, toluene, MEK or WD-40.  
Do not allow epoxy to harden on equipment.

**SAFETY** Please refer to the MSDS for Ultrabond 2300 published on our Website, [www.atc.ws](http://www.atc.ws)

**WARRANTY** Adhesives Technology Corporation (ATC) warrants to the Buyer that this product is in good quality and conforms to the manufacturer's specifications in force on the date of manufacture and when used in accordance with the Installation Instructions and when stored as directed in the technical literature. Manufacturer cannot warrant or guarantee any particular method of use, performance or application under any particular condition and Buyer is responsible for determining the suitability of intended purpose and assumes all risks therein. ATC shall not be liable for any injury, loss, cost of labor or consequential damages either directly, indirectly or incidentally, arising out of the use or misuse of any product sold by ATC or another distributor. If the product is proven to be in nonconformance, the Buyers sole remedy shall be a refund of the purchase price or replacement of product.

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ULTRABOND 2300 Cure Schedule			
Temperature		Working Time	Load Time
°C	°F		
35.0° C	95° F.	15 min	9 hrs
29.4° C	85° F.	25 min	10 hrs
23.8° C	75° F.	40 min	10 hrs
18.3° C	65° F.	45 min	24 hrs

The chart above indicates the temperature versus Load Time (Bolt up time) for Ultrabond 2300.

\*Load time is the amount of time required before applying allowable load (bolt-up time). Load-time and final cure time is based on the lowest temperature experienced during the cure schedule. Therefore, if the lowest temperature experienced by the anchor is 40°F, it will take 24 hours until anchor can be bolted up.

Working Time is the elapsed time in which the adhesive in the nozzle begins to increase in viscosity from a flowable material to a non-movable semi-solid.

## ULTRABOND 2300 LOAD TABLES

### TENSION LOADS FOR THREADED RODS – Safety Factor “Allowable” equals 25% of Ultimate Load, 32% for steel

Threaded Rod Diameter (in.)	Hole Diameter (in.)	Minimum Embedment Depth (in.)	f'c = 3000 psi		f'c = 5000 psi	
			Ultimate Tension Load (lbs.)	Allowable Tension Load (lbs.)	Ultimate Tension Load (lbs.)	Allowable Tension Load (lbs.)
3/8	7/16	3 3/8	9,336	2,334	9,728	2,432
1/2	9/16	4 1/2	14,500	3,652	14,712	3,678
5/8	3/4	5 5/8	21,804	5,451	22,460	5,615
3/4	7/8	6 3/4	29,108	7,277	30,208	7,552
7/8	1	7 7/8	37,768	9,442	40,228	10,057
1	1 1/8	9	46,432	11,608	50,252	12,563

### SHEAR LOADS FOR THREADED RODS – Safety Factor “Allowable” equals 25% of Ultimate Load, 32% for steel

Threaded Rod Diameter (in.)	Hole Diameter (in.)	Minimum Embedment Depth (in.)	f'c = 3000 psi		f'c = 5000 psi	
			Ultimate Shear Load (lbs.)	Allowable Shear Load (lbs.)	Ultimate Shear Load (lbs.)	Allowable Shear Load (lbs.)
3/8	7/16	3 3/8	7,216	1,804	6,852	1,713
1/2	9/16	4 1/2	9,692	2,423	10,840	2,710
5/8	3/4	5 5/8	15,024	3,756	15,220	3,805
3/4	7/8	6 3/4	20,320	5,080	19,600	4,900
7/8	1	7 7/8	30,916	7,729	26,984	6,746
1	1 1/8	9	41,468	10,367	34,364	8,591

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