



# Submittal Request

## SUBMITTED TO:

TO: \_\_\_\_\_ SUBMITTAL DATE: \_\_\_\_\_

COMPANY NAME: \_\_\_\_\_

PROJECT: \_\_\_\_\_

## PRODUCT INFORMATION:

SUBMITTED PRODUCT: **ULTRABOND 2**

SPECIFIED PRODUCT: \_\_\_\_\_

SECTION: \_\_\_\_\_ PAGE: \_\_\_\_\_ PARAGRAPH: \_\_\_\_\_ DETAIL/SHEET NO.: \_\_\_\_\_

DESCRIPTION OF APPLICATION: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## SUBMITTED BY:

NAME: \_\_\_\_\_ SIGNATURE: \_\_\_\_\_

COMPANY NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

PHONE: \_\_\_\_\_ EMAIL: \_\_\_\_\_

FAX: \_\_\_\_\_ DATE: \_\_\_\_\_

## FOR ARCHITECT/ENGINEER USE:

APPROVED: \_\_\_\_\_ APPROVED AS NOTED: \_\_\_\_\_ NOT APPROVED: \_\_\_\_\_

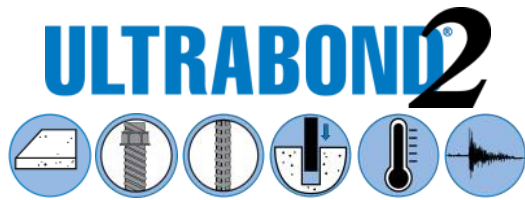
BRIEF EXPLANATION, IF NOT APPROVED: \_\_\_\_\_

\_\_\_\_\_

BY: \_\_\_\_\_ DATE: \_\_\_\_\_

REMARKS: \_\_\_\_\_

This submittal package contains the product data sheet, installation instructions and safety data sheet needed for evaluation of this submittal request



### Product Description

ULTRABOND® 2 is a two-component, 1:1 mix ratio, structural epoxy system that offers exceptional strength in anchoring and doweling applications and can be used in temperatures from 40 °F to 110 °F (4 °C to 43 °C). It has been tested in accordance with ASTM E488 and ASTM E1512 for its capability to resist static, dynamic, seismic and wind loads in uncracked concrete for both threaded rod and rebar.

### General Uses & Applications

- Anchoring threaded rod into uncracked concrete
- Short and long term tensile anchoring, including wind, seismic and shear forces in accordance with allowable stress design (ASD)
- Grouting dowel bars and tie bars for full depth concrete pavement repairs

### Advantages & Features

- Extended working time
- Moisture insensitive allowing installation and curing in damp environments
- In-service temperature range between 35 °F (2 °C) and 180 °F (82 °C)
- Withstands freeze-thaw conditions
- Little or no odor
- High modulus

**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](http://www.atcepoxy.com) to search by zip code.

### STANDARDS & APPROVALS

#### Multiple DOT Listings

(See ATC website for current list of Department of Transportation approvals throughout the United States)

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

**Storage & Shelf Life:** 28 months when stored in unopened containers in dry conditions. Store between 40 °F (4 °C) and 95 °F (35 °C).

**Installation & Estimation:** 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. An estimating guide for product usage can be found at [www.atcepoxy.com](http://www.atcepoxy.com).

**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:

- Do not thin with solvents, as this may affect 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
- Performance characteristics, such as seismic and long term load resistance, were tested in accordance with ASTM E488-96 (2003) & E1512-01 (2015) provisions and not that of ACI 355.4, and are therefore not applicable in the concrete tension zone - always consult with a design professional prior to use to ensure product applicability

**Safety:** Please refer to the Safety Data Sheet (SDS) for ULTRABOND 2 published on our website or call ATC for more information at 1-800-892-1880.

**Specification:** Anchoring adhesive shall be a two component, 1:1 ratio, high viscosity, solvent free epoxy system supplied in pre-measured containers. Epoxy must have a compressive yield strength of 10,688 psi (73.7 MPa) at 75 °F after a 7 day cure. Shelf life must be a minimum of 28 months. Adhesive shall be ULTRABOND 2 from Adhesives Technology Corp., Pompano Beach, Florida. Anchors shall be installed per the Manufacturer's Printed Installation Instructions (MPII) for ULTRABOND 2 anchoring epoxy.

#### ORDERING INFORMATION

**TABLE 1: ULTRABOND 2 Adhesive, Dispensing Tools and Mixing Nozzles**



A22-2N



TM22HD



TA22HD-A



T3438C



HBHT



HBEXT



HB100

| Package Size              | 21.2 oz. (627 ml) Cartridge |
|---------------------------|-----------------------------|
| Part #                    | A22-2N                      |
| Manual Dispensing Tool    | TM22HD                      |
| Pneumatic Dispensing Tool | TA22HD-A                    |
| Case Qty.                 | 12                          |
| Pallet Qty.               | 576                         |
| Pallet Weight (lbs.)      | 1,578                       |
| Recommended Mixing Nozzle | T3438C <sup>1</sup>         |

1. For projects with hole diameters greater than 3/4 in. the T3412CT can be used on A22-2N cartridge.

**TABLE 2: Wire Brushes, Handles and Adapters**

| Part # | Threaded Rod Diameter in.                                 | Rebar Diameter | Nominal Brush Diameter in. | Minimum Brush Diameter in. | Qty. |
|--------|---|----------------|----------------------------|----------------------------|------|
| HB038  | 3/8   | #3             | 5/8                        | 0.563                      | 1    |
| HB012  | 1/2   | #4             | 3/4                        | 0.675                      | 1    |
| HB058  | 5/8   | #5             | 1                          | 0.900                      | 1    |
| HB034  | 3/4   | #6             | 1 1/4                      | 1.125                      | 1    |
| HB078  | 7/8   | #7             | 1 1/2                      | 1.350                      | 1    |
| HB100  | 1   | #8             | 1 5/8                      | 1.463                      | 1    |
| HB125  | 1 1/4   | ----           | 1 3/4                      | 1.575                      | 1    |
| HBHT   | Steel brush 12" usable extension with T-Handle (manual)   |                |                            |                            | 1    |
| HBEXT  | Steel brush 12" usable extension with SDS + drill adaptor |                |                            |                            | 1    |

#### MATERIAL SPECIFICATION

**TABLE 3: ULTRABOND 2 performance to ASTM C881-14<sup>1</sup>**

| Property                   | Cure Time | ASTM Standard | Units     | Sample Conditioning Temperature |
|----------------------------|-----------|---------------|-----------|---------------------------------|
|                            |           |               |           | Class C                         |
|                            |           |               |           | 75 °F (24) °C                   |
| Gel Time - 60 Gram Mass    | ----      | C881          | min       | 12                              |
| Compressive Yield Strength | 7 day     | D695          | psi (MPa) | 10,688 (73.7)                   |
| Tensile Strength           |           | D638          | psi (MPa) | 545 (3.8)                       |
| Tensile Elongation         |           |               | %         | 6.0                             |
| Consistency or Viscosity   | ----      | C881          | ----      | Non-sag                         |

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.

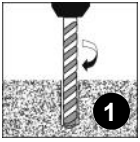
**TABLE 4: ULTRABOND 2 CURE SCHEDULE<sup>1,2,3</sup>**

| Base Material Temperature | Working Time | Full Cure Time |
|---------------------------|--------------|----------------|
| °F (°C)                   |              |                |
| 40 (4)                    | 60 min       | 72 hr          |
| 75 (24)                   | 28 min       | 48 hr          |
| 110 (43)                  | 12 min       | 24 hr          |

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 and ambient air temperature should be from 40 °F - 110 °F (4 °C - 43 °C).  
 3. When ambient or base material temperature falls below 70 °F (21 °C), condition the adhesive to 70 °F - 75 °F (21 °C - 24 °C) prior to use.

#### INSTALLATION INSTRUCTIONS (MPII)

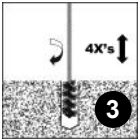
##### Drilling and Cleaning



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. **CAUTION:** Always wear appropriate personal protection equipment (PPE) for eyes, ears & skin and avoid inhalation of dust during the drilling and cleaning process. Refer to the Safety Data Sheet (SDS) for details prior to proceeding.



**NOTE:** Remove any standing water from hole prior to beginning the cleaning process. If removal of standing water is not possible, please contact ATC for application specific installation instructions. Using oil free compressed air with a minimum pressure of 80 psi (5.5 bar), 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 4 seconds/cycles (4X).



Select the correct wire brush size for the drilled hole diameter (see Table 2), making sure that the brush 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 4 cycles (4X). **CAUTION:** 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.



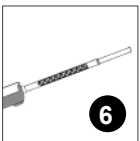
Blow the hole out once more to remove brush debris using oil free compressed air with a minimum pressure of 80 psi (5.5 bar). Insert the air wand to the bottom of the drilled hole and blow out the debris with an up/down motion for a minimum of 4 seconds/cycles (4X). Visually inspect the hole to confirm it is clean.

**NOTE:** If installation will be delayed for any reason, cover cleaned holes to prevent contamination.

##### Cartridge Preparation



**CAUTION:** Check the expiration date on the cartridge to ensure it is not expired. **Do not use expired product!** Remove the protective cap from the adhesive cartridge and insert the cartridge into the recommended 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.

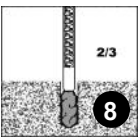


Only after the cartridge has been balanced, screw on the proper ATC mixing nozzle to the cartridge (see Table 1). Do not modify mixing nozzle and confirm that internal mixing element is in place prior to dispensing adhesive. Take note of the air and base material temperatures and review the working/full cure time chart (see Table 4) prior to starting the injection process.

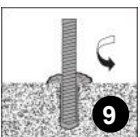


Dispense the initial amount of material from the mixing nozzle onto a disposable surface until the product is a uniform gray color with no streaks, as adhesive must be properly mixed in order to perform as published. Dispose of the initial amount of adhesive according to local regulations prior to injection into the drill hole. **CAUTION:** When changing cartridges, never re-use nozzles. A new nozzle should be used with each new cartridge and steps 5-7 should be repeated accordingly.

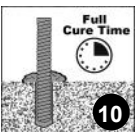
##### Installation and Curing (Vertical Down and Horizontal)



**NOTE:** The engineering drawings must be followed. For any applications not covered by this document, or if there are any installation questions, please contact Adhesives Technology Corp. 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 90 psi (6.2 bar) 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. For horizontal installations, wedges should be used to center and support the anchor while the adhesive is curing. **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 and moisture dependent - refer to Table 4 for appropriate full cure time.

#### TECHNICAL DATA



**TABLE 5: ULTRABOND 2 IN-SERVICE CHART<sup>1</sup>**

| Base Material Temperature | Allowable Load Capacity Reduction Factor |
|---------------------------|--|
| °F (°C)                   |  |
| 35 (2)                    | 1.00                                     |
| 70 (21)                   | 1.00                                     |
| 110 (43)                  | 1.00                                     |
| 135 (57)                  | 0.79                                     |
| 150 (66)                  | 0.79                                     |
| 180 (82)                  | 0.65                                     |

1. Reduction factors may be linearly interpolated between listed temperatures.

**TABLE 6: ULTRABOND 2 ultimate and allowable TENSION loads for THREADED ROD in normal-weight concrete<sup>1,2</sup>**

| Threaded Rod Diameter in. | Nominal Drill Bit Diameter in. | Embedment Depth in. (mm) | Tension Load Based on Bond Strength/Concrete Capacity |                     |   |                     | Allowable Tension Load Based on Steel Strength <sup>3</sup> |                              |                                |
|---------------------------|--------------------------------|--------------------------|---|---------------------|---|---------------------|---|------------------------------|--------------------------------|
|                           |                                |                          | $f'_c \geq 2,000$ psi (20.7 MPa) <sup>4</sup>         |                     | $f'_c \geq 4,000$ psi (27.6 MPa) <sup>4</sup> |                     | ASTM F1554 Grade 36 lbs. (kN)                               | ASTM A193 Grade B7 lbs. (kN) | ASTM F593 304/316 SS lbs. (kN) |
|                           |                                |                          | Ultimate lbs. (kN)                                    | Allowable lbs. (kN) | Ultimate lbs. (kN)                            | Allowable lbs. (kN) |   |                              |                                |
| 3/8                       | 7/16                           | 3 1/2 (89)               | 8,637 (38.4)  | 2,159 (9.6)         | 8,637 (38.4)                                  | 2,159 (9.6)         | 2,114 (9.4)   | 4,556 (20.3)                 | 3,645 (16.2)                   |
| 1/2                       | 9/16                           | 4 1/2 (114)              | 17,076 (76.0)   | 4,269 (19.0)        | 17,953 (79.9)                                 | 4,488 (20.0)        | 3,758 (16.7)  | 8,099 (36.0)                 | 6,480 (28.8)                   |
| 5/8                       | 3/4                            | 5 5/8 (143)              | 23,865 (106.2)  | 5,966 (26.5)        | 28,356 (126.1)                                | 7,089 (31.5)        | 5,872 (26.1)  | 12,655 (56.3)                | 10,124 (45.0)                  |
| 3/4                       | 7/8                            | 6 3/4 (171)              | 31,371 (139.5)  | 7,843 (34.9)        | 38,709 (172.2)                                | 9,677 (43.0)        | 8,456 (37.6)  | 18,224 (81.1)                | 12,392 (55.1)                  |
| 7/8                       | 1                              | 7 7/8 (200)              | 39,532 (175.8)  | 9,883 (44.0)        | 48,410 (215.3)                                | 12,103 (53.8)       | 11,509 (51.2)   | 24,804 (110.3)               | 16,867 (75.0)                  |
| 1                         | 1 1/8                          | 9 (229)                  | 48,299 (214.8)  | 12,075 (53.7)       | 60,648 (269.8)                                | 15,162 (67.4)       | 15,033 (66.9)   | 32,398 (144.1)               | 22,030 (98.0)                  |
| 1 1/4                     | 1 3/8                          | 11.25 (286)              | 67,500 (300.3)  | 16,875 (75.1)       | 90,626 (403.1)                                | 22,657 (100.8)      | 23,488 (104.5)  | 50,621 (225.2)               | 34,423 (153.1)                 |

1. Allowable bond strength/concrete capacity was calculated using a safety factor of 4.0.
2. The lower value of either the allowable bond strength/concrete capacity or steel strength should be used as the allowable tension value for design.
3. Allowable steel strengths calculated in accordance with AISC Manual of Steel Construction: Tensile =  $0.33 \cdot F_u \cdot A_{nom}$ .
4. Linear interpolation may be used for intermediate concrete compressive strengths.

#### TECHNICAL DATA



**TABLE 7: ULTRABOND 2 ultimate and allowable SHEAR loads for THREADED ROD in normal-weight concrete<sup>1,2</sup>**

| Threaded Rod Diameter in. | Nominal Drill Bit Diameter in. | Embedment Depth in. (mm) | Shear Load Based on Bond Strength/Concrete Capacity |                     | Allowable Shear Load Based on Steel Strength <sup>3</sup> |                              |                                |
|---------------------------|--------------------------------|--------------------------|---|---------------------|---|------------------------------|--------------------------------|
|                           |                                |                          | $f'_c \geq 2,000$ psi (20.7 MPa) <sup>4</sup>       |                     | ASTM F1554 Grade 36 lbs. (kN)                             | ASTM A193 Grade B7 lbs. (kN) | ASTM F593 304/316 SS lbs. (kN) |
|                           |                                |                          | Ultimate lbs. (kN)                                  | Allowable lbs. (kN) |   |                              |                                |
| 1/2                       | 9/16                           | 4 1/2 (114)              | 13,090 (58.2)                                       | 3,273 (14.6)        | 1,936 (8.6)   | 4,172 (18.6)                 | 3,338 (14.8)                   |
| 5/8                       | 3/4                            | 5 5/8 (143)              | 20,892 (92.9)                                       | 5,223 (23.2)        | 3,025 (13.5)  | 6,519 (29.0)                 | 5,216 (23.2)                   |
| 3/4                       | 7/8                            | 6 3/4 (171)              | 31,721 (141.1)                                      | 7,930 (35.3)        | 4,356 (19.4)  | 9,388 (41.8)                 | 6,384 (28.4)                   |
| 7/8                       | 1                              | 7 7/8 (200)              | 36,577 (162.7)                                      | 9,144 (40.7)        | 5,929 (26.4)  | 12,778 (56.8)                | 8,689 (38.7)                   |
| 1                         | 1 1/8                          | 9 (229)                  | 53,165 (236.5)                                      | 13,291 (59.1)       | 7,744 (34.4)  | 16,690 (74.2)                | 11,349 (50.5)                  |
| 1 1/4                     | 1 3/8                          | 11 1/4 (286)             | 83,052 (369.4)                                      | 20,763 (92.4)       | 12,100 (53.8)   | 26,078 (116.0)               | 17,733 (78.9)                  |

1. Allowable bond strength/concrete capacity was calculated using a safety factor of 4.0.
2. The lower value of either the allowable bond strength/concrete capacity or steel strength should be used as the allowable shear value for design.
3. Allowable steel strengths calculated in accordance with AISC Manual of Steel Construction: Shear =  $0.17 \cdot F_u \cdot A_{nom}$ .

**Safety Data Sheet**  
**ULTRABOND® 2**

Created On: 03/10/2015  
 Revision Date: 04/06/16  
 Version: 3.0

**1. Product and Company Identification**

**Product Name:** ULTRABOND 2 (Part A)

**Product Use:** Anchoring

**Company Identification:**  
 ADHESIVES TECHNOLOGY CORP.  
 450 East Copans Road  
 Pompano Beach, FL 33064  
 Contact Phone: 1.800.892.1880  
 (9:00a.m. – 5:00p.m. EST)

**Emergency Phone:**  
 Chem-Tel:  
 1.800.255.3924 (24hrs)

**2. Hazards Identification (Part A)**

**GHS Classification**

| Health   | Physical       | Environmental  |
|--|----------------|----------------|
| Skin Irritant Cat 2<br>Eye Irritant Cat 2B<br>Carcinogen Cat 2 | Not Classified | Not Classified |

GHS Label:

**Warning:**



Eye Irritant  
 Skin Irritant

**Emergency Overview**

May cause skin sensitization  
 Causes skin and eye irritation  
 May cause cancer  
 Wash skin thoroughly after handling  
 Avoid breathing fume/gas/mist/vapors/spray  
 Wear protective gloves/ protective clothing/ eye protection/ face protection  
 Use outdoors or in a well-ventilated area

**Primary Route of Exposure**

Eyes, skin and oral

**Carcinogenicity**

This product or one of its ingredients present at 0.1% or more IS listed as a carcinogen or suspect carcinogen by NTP, IARC, Prop 65 or OSHA.

This product contains crystalline silica (quartz sand). IARC has classified crystalline silica as a Group 1 carcinogen. Both IARC and NTP consider silica as a known human carcinogen. Evidence is based on the

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Created On: 03/10/2015

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chronic and long-term exposure workers have had to respirable sized crystalline silica dust particles. Because this product is in liquid or paste form, it does not pose a dust hazard; therefore, **this classification is not relevant.** (Note: sanding of this product will create a possible silica dust hazard).

This product contains titanium dioxide which IARC has classified as a Group 2B carcinogen (possibly carcinogenic to humans). Evidence is based on sufficient animal testing as a result of long-term inhalation at high concentrations of respirable amounts of titanium dioxide. Because this product is in liquid or paste form, it does not pose a dust hazard; therefore, **this classification is not relevant.** (Note: sanding of this product will create a possible dust hazard).

### 3. Composition/ Information on Ingredients (Part A)

| <u>CAS Number</u> | <u>Content%</u> | <u>Chemical Name</u>                 |
|-------------------|-----------------|--------------------------------------|
| 25068-38-6        | 40 - 70         | Bisphenol A Epoxy Resin              |
| 14808-60-7        | 20 - 40         | Crystalline Silica (quartz)          |
| 68460-21-9        | 7 - 15          | Trimethylol Ethane Triglycidyl Ether |
| 13463-67-7        | 1 - 5           | Titanium Dioxide                     |

### 4. First Aid Measures (Part A)

**Inhalation:** Move to fresh air; give oxygen if breathing is difficult. Call a physician if symptoms persist.

**Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes. Call a physician if symptoms persist.

**Skin:** Remove contaminated clothing. Wash with mild soap and water. Get medical attention if skin irritation or dermatitis persists.

**Ingestion:** Give plenty of water. DO NOT induce vomiting. Call a physician immediately.

**Other:** Referral to a physician is recommended if there is any question about the seriousness of the injury/exposure. If sensitization occurs, future contact with the material should be avoided.

### 5. Fire Fighting Measures (Part A)

Flash Point: N/D

Flammable Limits: N/D

#### Extinguisher Media

Carbon Dioxide, Dry Chemical, Water Fog

#### Unusual Fire and Explosion Hazard

None known. Thermal Decomposition can be formed.

#### Special Fire Fighting Procedures

Firefighters must wear self-contained breathing apparatus and full protective clothing to prevent contact with toxic and/or irritating fumes.

### 6. Accidental Release Measures (Part A)

#### Personal Precautions:

Avoid all personal contact. In enclosed areas, cleanup personnel should wear self-contained breathing apparatus.



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#### Environmental Precautions

Cover spills with sawdust, vermiculite, or other absorbent material to minimize spreading of the material before collecting.

#### 7. Handling and Storage (Part A)

**Handling:** Avoid contact with eyes, skin and clothing. Avoid inhalation of vapors. Use with adequate ventilation. Use appropriate personal protection equipment (Section 8). Wash thoroughly after handling.

**Storage:** Store in a cool dry place away from direct sunlight. Keep from freezing. Recommended storage temperature ranges in between 4 °C and 35 °C (40°F and 95° F).

#### 8. Exposure Control and Personal Protection (Part A)

##### Exposure Guidelines

| Component                                  | CAS#       | OSHA PEL              | TLV                     |
|--|------------|-----------------------|-------------------------|
| Titanium Dioxide                           | 13463-67-7 | 15 mg/m <sup>3</sup>  | 10 mg/m <sup>3</sup>    |
| Quartz Silica Sand<br>(Crystalline Silica) | 14808-60-7 | 0.1 mg/m <sup>3</sup> | 0.025 mg/m <sup>3</sup> |

**Engineering Measures:** Use local and general exhaust ventilation to maintain airborne concentrations below TLV. Suitable respiratory equipment should be used in cases of insufficient ventilation or where operational procedures demand it.

##### Personal Protective Equipment

###### Respiratory Protection

None normally required. Use a NIOSH approved organic vapor chemical cartridge respirator when air movement is inadequate to control vapor build-up.

###### Eye/Face Protection

Wear splash proof chemical goggles/ full face shield if there is a potential for splashing.

###### Skin / Body Protection

Wear Suitable gloves (neoprene, nitrile rubber or PVC) and protective clothing to mitigate exposure.

###### Other Protective Clothing or Equipment

Use protective clothing which is chemical resistant to this material. Safety shoes and boots should also be chemical resistant.

#### 9. Physical and Chemical Properties (Part A)

Physical State: Liquid  
Appearance: White Liquid  
Evaporation Rate: N/D  
Odor: Slight Odor

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|                         |   |
|-------------------------|---|
| Odor Threshold:         | N/D                                     |
| Melting/Freezing Point: | N/D                                     |
| Boiling Point and Range | N/D                                     |
| Solubility in Water:    | Insoluble                               |
| Specific Gravity(g/cc): | N/D                                     |
| Vapor Density(air = 1): | N/D                                     |
| Vapor Pressure:         | N/D                                     |
| VOC Content:            | See section 9 of part B for VOC content |
| pH:                     | N/D                                     |
| Boiling Point:          | N/D                                     |

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#### 10. Stability and Reactivity (Part A)

|                        |   |
|------------------------|---|
| Stability:             | Stable  |
| Thermal Decomposition: | Can yield CO, CO <sub>2</sub> and organic Nitrogen compounds.                     |
| Incompatibility:       | Strong acids, peroxides, and other oxidizing agents                               |
| Conditions to avoid:   | Exposure to excessive heat and storage above 35°C (95°F) will shorten shelf life. |

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#### 11. Toxicological Information (Part A)

Not Determined

**Acute Dermal Toxicity:**

Not Determined

**Acute Inhalation Toxicity:**

Not Determined

**Skin Irritation:**

Irritating to skin

The product has not been tested. The statement has been derived from the properties of the individual components.

**Eye Irritation:**

Irritating to eyes.

The product has not been tested. The statement has been derived from the properties of the individual components.

**Respiratory Irritation:**

Inhalation of vapors or mists may cause irritation to the respiratory system.

**Sensitization:**

May cause allergic skin reaction and irritation to the respiratory system.

The product has not been tested. The statement has been derived from the properties of the individual components.

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#### STOT – single exposure

Not Determined

#### STOT – Repeated Exposure

Not Determined

#### Carcinogenicity Classification:

##### Titanium Dioxide:

IARC Group 2B: Possibly carcinogenic to humans.

This product contains a chemical or chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

##### Quartz Silica Sand (Crystalline Silica):

IARC Group 1: Known human carcinogen based on human evidence.

NTP (National Toxicology Program) has classified Crystalline Silica as a known human carcinogen.

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## 12. Ecological Information (Part A)

#### Fish:

Bisphenol A:

Fathead minnow/LC50 (96hrs): >3.1mg/l

#### Aquatic Invertebrates:

Bisphenol A:

Water Flea Daphnis/EC 50 (48hrs): > 1.4mg/l

#### Algae:

No Data Available

#### Microorganisms:

Bisphenol A:

Bacteria, (Growth inhibition)/IC50 (18hrs): > 42.6mg/l

#### Mobility:

Considering the use of the substance, it is unlikely that significant environmental exposure in the air or water will arise.

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## 13. Disposal Considerations (Part A)

If the material as supplied becomes a waste, dispose in accordance with federal, state and local regulations.

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## 14. Transportation Information (Part A)

This product is not regulated as a hazardous material for transportation.

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#### 15. Regulatory Information (Part A)

| HMIS Rating     |   |
|-----------------|---|
| Health          | 2 |
| Flammability    | 1 |
| Physical Hazard | 0 |
| PPE             | B |

#### NFPA Rating



**Hazard Rating:** 0 = minimal, 1 = Slight, 2 = moderate, 3 = severe, 4 = extreme

#### Federal Regulations

##### CERCLA RQ

SARA Title 311/312

Not Determined

CA Prop 65

This product contains a chemical or chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

TSCA

Listed or Exempt

#### State Regulations:

State RTK  
NJ, MA, PA

CAS#  
25068-38-6  
13463-67-7

Chemical Name  
Bisphenol A Epoxy Resin  
Titanium Dioxide

#### 16. Other Information (Part A)

**Hazard Communication:** This SDS has been prepared in accordance with the federal OSHA Hazard Communication Standard

To the best of our knowledge, the information contained herein is accurate. However, Adhesives Technology Corp. does not assume any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Additional information is available upon request.

**Safety Data Sheet**  
**ULTRABOND® 2**

Created On: 03/10/2015  
 Revision Date: 04/06/16  
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**1. Product and Company Identification**

**Product Name:** ULTRABOND 2 (Part B)

**Product Use:** Anchoring

**Company Identification:**  
 ADHESIVES TECHNOLOGY CORP.  
 450 East Copans Road  
 Pompano Beach, FL 33064  
 Contact Phone: 1.800.892.1880  
 (9:00a.m. – 5:00p.m. EST)

**Emergency Phone:**  
 Chem-Tel:  
 1.800.255.3924 (24hrs)

**2. Hazards Identification (Part B)**

**GHS Classification**

| Health   | Physical       | Environmental               |
|--|----------------|-----------------------------|
| Skin Corrosion Cat 1B<br>Serious Eye Damage Cat 1<br>Carcinogen Cat 1<br>Reproductive Toxicity Cat 2 | Not Classified | Toxic to Aquatic Life Cat-2 |

GHS Label:

**Danger:**



Corrosive to skin and eyes



Carcinogen  
 Reproductive Toxicity

**Emergency Overview**

Causes skin burns  
 Causes severe eye damage  
 May cause cancer  
 Suspected of damaging fertility  
 Wash skin thoroughly after handling  
 Avoid breathing fume/gas/mist/vapors/spray  
 Wear protective gloves/ protective clothing/ eye protection/ face protection  
 Use outdoors or in a well-ventilated area  
 Avoid contact during pregnancy/while nursing

**Primary Route of Exposure**

Eyes, skin and oral

**Carcinogenicity**

This product or one of its ingredients present at 0.1% or more IS listed as a carcinogen or suspect carcinogen by NTP, IARC, Prop 65 or OSHA.

This product contains crystalline silica (quartz sand). IARC has classified crystalline silica as a Group 1

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carcinogen. Both IARC and NTP consider silica as a known human carcinogen. Evidence is based on the chronic and long-term exposure workers have had to respirable sized crystalline silica dust particles. Because this product is in liquid or paste form, it does not pose a dust hazard; therefore, **this classification is not relevant.** (Note: sanding of this product will create a possible silica dust hazard)

#### 3. Composition/ Information on Ingredients (Part B)

| <u>CAS Number</u> | <u>Content %</u> | <u>Chemical Name</u>                    |
|-------------------|------------------|---|
| 140-31-8          | 7 – 15           | n-aminoethylpiperazine                  |
| 84852-15-3        | 7 – 15           | Nonyl phenol                            |
| 68953-36-6        | 7 – 15           | Modified Polyamide Resin                |
| 100-51-6          | 5 – 10           | Benzyl Alcohol                          |
| 14808-60-7        | 40 – 60          | Quartz Silica Sand (Crystalline Silica) |
| Proprietary       | 20 – 30          | Non Hazardous                           |

#### 4. First Aid Measures (Part B)

**Inhalation:** Move to fresh air; give oxygen if breathing is difficult. Call a physician if symptoms persist.

**Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes. Call a physician if symptoms persist.

**Skin:** Remove contaminated clothing. Wash with mild soap and water. Get medical attention if skin irritation or dermatitis persists.

**Ingestion:** Give plenty of water. DO NOT induce vomiting. Call a physician immediately.

**Other:** Referral to a physician is recommended if there is any question about the seriousness of the injury/exposure. If sensitization occurs, future contact with the material should be avoided.

#### 5. Fire Fighting Measures (Part B)

Flash Point: N/D

Flammable Limits: N/D

##### Extinguisher Media

Carbon Dioxide, Dry Chemical, Water Fog

##### Unusual Fire and Explosion Hazard

None known. Thermal Decomposition can be formed.

##### Special Fire Fighting Procedures

Firefighters must wear self-contained breathing apparatus and full protective clothing to prevent contact with toxic and/or irritating fumes.

#### 6. Accidental Release Measures (Part B)

##### Personal Precautions:

Avoid all personal contact. In enclosed areas, cleanup personnel should wear self-contained breathing apparatus.

##### Environmental Precautions

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Cover spills with sawdust, vermiculite, or other absorbent material to minimize spreading of the material before collecting.

#### 7. Handling and Storage (Part B)

**Handling:** Avoid contact with eyes, skin and clothing. Avoid inhalation of vapors. Use with adequate ventilation. Use appropriate personal protection equipment (Section 8). Wash thoroughly after handling.

**Storage:** Store in a cool dry place away from direct sunlight. Keep from freezing. Recommended storage temperature ranges in between 4 °C and 35 °C (40°F and 95° F).

#### 8. Exposure Control and Personal Protection (Part B)

##### Exposure Guidelines

| Component                                  | CAS#       | OSHA PEL              | TLV                     |
|--|------------|-----------------------|-------------------------|
| Quartz Silica Sand<br>(Crystalline Silica) | 14808-60-7 | 0.1 mg/m <sup>3</sup> | 0.025 mg/m <sup>3</sup> |
| Benzyl Alcohol                             | 100-51-6   | 50ppm (Ceiling)       | 100 mg/m <sup>3</sup>   |

**Engineering Measures:** Use local and general exhaust ventilation to maintain airborne concentrations below TLV. Suitable respiratory equipment should be used in cases of insufficient ventilation or where operational procedures demand it.

##### Personal Protective Equipment

###### **Respiratory Protection**

None normally required. Use a NIOSH approved organic vapor chemical cartridge respirator when air movement is inadequate to control vapor build-up.

###### **Eye/Face Protection**

Wear splash proof chemical goggles/ full face shield if there is a potential for splashing.

###### **Skin / Body Protection**

Wear Suitable gloves (neoprene, nitrile rubber or PVC) and protective clothing to mitigate exposure.

###### **Other Protective Clothing or Equipment**

Use protective clothing which is chemical resistant to this material. Safety shoes and boots should also be chemical resistant.

#### 9. Physical and Chemical Properties (Part B)

Appearance: Black Paste  
Evaporation Rate: N/D  
Odor: Slight Odor  
Solubility in Water: Insoluble  
Specific Gravity(g/cc): N/D  
Vapor Density: N/D

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|                 |  |
|-----------------|--|
| Vapor Pressure: | N/D  |
| VOC Content:    | 2 g/L (tested per EPA CFR 40, Part 63, Subpart PPPP, Appendix A) |
| pH:             | N/D  |
| Boiling Point:  | N/D  |

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#### 10. Stability and Reactivity (Part B)

|                        |   |
|------------------------|---|
| Stability:             | Stable  |
| Thermal Decomposition: | Can yield CO, CO <sub>2</sub> and organic Nitrogen compounds.                     |
| Incompatibility:       | Strong acids, peroxides, and other oxidizing agents                               |
| Conditions to avoid:   | Exposure to excessive heat and storage above 35°C (95°F) will shorten shelf life. |

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#### 11. Toxicological Information (Part B)

**Acute Oral Toxicity:**  
Not Determined

**Acute Dermal Toxicity:**  
Not Determined

**Acute Inhalation Toxicity:**  
Not Determined

**Skin Irritation:**  
Corrosive to skin  
The product has not been tested. The statement has been derived from the properties of the individual components.

**Eye Irritation:**  
Severe damage to eyes.  
The product has not been tested. The statement has been derived from the properties of the individual components.

**Respiratory Irritation:**  
Inhalation of vapors or mists may cause lung irritation to the respiratory system.

**Sensitization:**  
May cause allergic skin reaction and irritation to the respiratory system.  
The product has not been tested. The statement has been derived from the properties of the individual components.

**STOT – single exposure**  
Not Determined

**STOT – Repeated Exposure**



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### ULTRABOND® 2

Created On: 03/10/2015

Revision Date: 04/06/16

Version: 3.0

Not Determined

#### **Carcinogenicity Classification:**

##### **Quartz Silica Sand (Crystalline Silica):**

IARC Group1: Known human carcinogen based on human evidence.

NTP (National Toxicology Program) has classified Crystalline Silica as a known human carcinogen.

## 12. Ecological Information (Part B)

#### **Acute Toxicity for:**

##### **Fish:**

Polyamide Resin:

Zebrafish /LC50 (96hrs): >5.0mg/l

##### **Aquatic Invertebrates:**

Polyamide Resin:

Water Flea Daphnis/EC 50 (48hrs): > 7.07mg/l

##### **Algae:**

No Data Available

##### **Microorganisms:**

No Data Available

##### **Mobility:**

Considering the use of the substance, it is unlikely that significant environmental exposure is the air or water will arise.

## 13. Disposal Considerations (Part B)

If the material as supplied becomes a waste, dispose in accordance with federal, state and local regulations.

## 14. Transportation Information (Part B)

#### **DOT (US)**

**CARTRIDGE:** Limited Quantity, LTD QTY

**\*BULK:** AMINES, LIQUID, CORROSIVE, N.O.S. (aminoethylpiperazine, 4-Nonylphenol, branched), Class 8, UN 2735, PG III

\*Bulk packaging in quantities of 1.3 gallons (net) or less are packaged in accordance with the limited quantity exception.

#### **IATA/ICAO**

**CARTRIDGE/BULK:** AMINES, LIQUID, CORROSIVE, N.O.S. (aminoethylpiperazine, 4-Nonylphenol, branched), Class 8, UN 2735, PG III

#### **IMDG**

**CARTRIDGE/BULK:** AMINES, LIQUID, CORROSIVE, N.O.S. (aminoethylpiperazine, 4-Nonylphenol, branched), Class 8, UN 2735, PG III

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**15. Regulatory Information (Part B)**

| HMIS Rating     |    |
|-----------------|----|
| Health          | *3 |
| Flammability    | 1  |
| Physical Hazard | 0  |
| PPE             | B  |



**Hazard Rating:** 0 = minimal, 1 = Slight, 2 = moderate, 3 = severe, 4 = extreme

Federal Regulations

SARA Title 311/312

Chronic Health Hazard

CA Prop 65

This product does contain a chemical or chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

TSCA

Listed or Exempt

State Regulations:

State RTK  
 NJ, MA, PA

CAS#  
 14808-60-7  
 140-31-8

Chemical Name  
 Quartz Silica Sand (Crystalline Silica)  
 n-aminoethylpiperazine

**16. Other Information**

**Hazard Communication:** This SDS has been prepared in accordance with the federal OSHA Hazard Communication Standard

To the best of our knowledge, the information contained herein is accurate. However, Adhesives Technology Corp. does not assume any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Additional information is available upon request.