



# Universal Adhesive Clear

## 08217

Technical Data

June 2017

### Product Description

3M™ Universal Adhesive Clear is a two-part epoxy based adhesive with a medium viscosity used as a general purpose adhesive for metal, glass and plastic.

### Features

- Clear Non-Yellowing
- Bonds multiple substrates
- 200 ml Duo-Syringe Cartridge System

### Typical Physical Properties

**Note:** The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

|  |                               |
|--|-------------------------------|
| Container                                | 200 mL dual-syringe cartridge |
| Base                                     | Epoxy                         |
| Density lbs/Gallon (Appx.)               | 9.6 lbs/gal.                  |
| Color                                    | Amber/<br>Clear               |
| Viscosity (CPS) Brookfield<br>Viscometer | 8,000 - 15,000 cps            |
| Solids Content (Appx.)                   | 100%                          |
| Consistency                              | Paste                         |
| Service Temperature - °F                 | -20° to 180°F                 |

### Product Uses

3M™ Universal Adhesive Clear is a two-part epoxy adhesive designed to bond and seal plastics, primed metals, and glass. May also be used on industrial and architectural surfaces needing minor repairs. For best results use in conjunction with 3M™ Polyolefin Adhesion Promoter (PN 05907) when repairing polyolefin type plastics.

**Use with the following applicators: PN 08571 (manual), PN 08117 (manual), and PN 09930 (pneumatic).**

**3M™ Static Mixing Nozzle: PN 08193 (6/bag), PN 08194 (50/box).**

**For professional use only. Not intended for retail sale.**

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## Typical Performance Properties

**Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.**

The following times have been determined with ambient air temperature and substrate temperature @ 70°F and are considered typical values.

**WORK TIME:**  
3 minutes

**MIX NOZZLE DWELL TIME:**  
2 minutes

**CLAMP TIME**  
30 minutes

**CURE TIME:**  
1 hour

|                       |         |                            |
|-----------------------|---------|----------------------------|
| <b>Lap Shear, SMC</b> | 460 PSI | ASTM D1002 / 2" per minute |
| <b>Lap Shear, FRP</b> | 830 PSI | ASTM D1002 / 2" per minute |
| <b>Lap Shear, TPO</b> | 500 PSI | ASTM D1002 / 2" per minute |
| <b>Lap Shear, PP</b>  | 400 PSI | ASTM D1002 / 2" per minute |
| <b>Lap Shear, TEO</b> | 320 PSI | ASTM D1002 / 2" per minute |

Overlap shear test method: Overlap shear test for adhesion determined in accordance with ASTM D1002. Sample dimensions 1" x 4" x .0111" with an overlap area of 1/2" x 1". Plastics cleaned with 3M™ General Purpose Adhesive Cleaner PN 08984 and DA sanded with P80 abrasive. Thermopolyolefin and Polypropylene plastics coated with 3M™ Polyolefin Adhesion Promoter PN 05907.

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### Directions for Use

#### SURFACE PREPARATION:

1. Wash surface with soap and water to remove water soluble contaminants. Follow the soap and water wash with an appropriate VOC compliant product for removal of surface contaminants.
2. Prime the clean, abraded metal surfaces with a two - part primer (epoxy or urethane, NOT acid-etch).
3. Sand plastic surfaces with a grade 80 abrasive. Primed metal surfaces should be scuffed with a Scotch-Brite™ General Purpose Hand Pad (Ultrafine), (PN 07448).
4. Remove dust from surface using clean, un-oiled compressed air and a clean, dry rag.

#### PRODUCT PREPARATION:

1. Insert cartridge into applicator gun.
2. Remove retaining collar and plug.
3. Extrude a small amount of product until both parts A and B dispense equally.
4. Attach 3M™ Mixing Nozzle (PN 08193) to cartridge and lock in place with retaining collar.

**CAUTION:** *Before proceeding with next step have all parts accessible and ready for repair.*

5. Dispense a small amount of material and discard.

#### GENERAL REPAIR PROCESS:

1. Apply adhesive to one of the parts and assemble the parts within 3 minutes.
2. Clamp parts together for 30 minutes.

**NOTE:** Allow to cure 1 hour before putting repaired part into service.

#### **CLEANUP**

Unmixed material may be cleaned from most surfaces with an appropriate VOC compliant product.

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### Applications

See “Product Uses” above.

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### Storage and Handling

#### HANDLING

Avoid eye contact with vapors, mists, or spray. Avoid breathing of dust created by cutting, sanding, grinding or machining. Avoid breathing of vapors, mists or spray. Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Avoid contact with oxidizing agents.

#### STORAGE

When stored at the recommended conditions in original, unopened containers, this product has a shelf life of 12 months from the date of manufacture. Store away from acids. Store away from oxidizing agents.

**After use, leave mixing nozzle in place to seal the cartridge.**

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## Precautionary Information

Before using this product, please reference Product Label and/or Safety Data Sheet for Health and Safety Information. Note: Laws controlling the acceptable amounts of Volatile Organic Compounds (VOC's) vary by state, and in some cases by locality. For surface preparation and clean-up activities, consult federal, state and local regulations regarding use of products containing VOCs in your area.

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## Technical Information

The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed.

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## Product Use

Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. Given the variety of factors that can affect the use and performance of a 3M product, user is solely responsible for evaluating the 3M product and determining whether it is fit for a particular purpose and suitable for user's method of application.

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