



Technical Data Sheet

3M™ Scotch-Weld™ One-Part Epoxy Adhesive 6101 Off-White

Product Description

3M™ Scotch-Weld™ One-Part Epoxy Adhesive 6101 Off-White (AHS 1831) is a one-part epoxy exhibiting a low temperature cure or fast high temperature cure with long room temperature pot life. It is flexible and toughened resulting in high impact performance.

Product Features

- One-part with stability at room temperature
- Low temperature cure and fast cure options
- Excellent impact resistance
- Plastic Bonding
- Contains a UV indicator to enhance detection during manual or automated application

Technical Information Note

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

Typical Uncured Physical Properties

Property	Values	Additional Information
Components	1-Part	
Color	Off-White	View 
<p>Notes: Colors may vary from nearly white to yellow/amber. Adhesive performance is not affected by color variation.</p>		
UV Tracer	Yes	
Viscosity	50000 cP	View 
<p>Notes: Cone and Plate, RT, 5Hz, 25mm SS plates, 0.0989 rad cone</p>		
Halogens (Cl, Br)	Representative samples have been tested and meet the chlorine and bromine content requirements of IEC 61249-2-21	View 
<p>Notes: Per IEC 61249-2-21</p>		
Pot Life	> 4 weeks	View 
<p>Notes: Time to double viscosity measure by cone and plate rheometer.</p>		

Viscosity	50000 cP	View 
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Notes: Brookfield spindle #7 50RPM

Typical Mixed Physical Properties

Property	Values	Additional Information
Cure Time	≈20 min	View 

Temp C: 65C
Temp F: 149F

Notes: Time to 90% cure by differential scanning calorimetry (DSC). Includes ramp time to temperature.

Cure Time	≈3 min	View 
Temp C: 90C Temp F: 194F		

Notes: Time to 90% cure by differential scanning calorimetry (DSC). Includes ramp time to temperature.

Typical Performance Characteristics

Property	Values	Additional Information
Tensile Strength	27 MPa	View 

Test Method: ASTM D638

Notes: Type V dogbone. Jaw separation 2 in/min, tested at 25°C / 50%RH.

Tensile Impact on AL	2.4 J	View 
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Notes: Tested with Instron™ CEAST 9340 Drop Tower. Grit blasted AL frame and windows with bond area 279mm², thickness 125µm, 2.5mm bond width. 22kN impact probe, drop height 115mm, 10Kg additional mass. Report energy required to debond coupon in tensile mode.

Elongation	100 %	View 
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Test Method: ASTM D638

Notes: Type V dogbone. Jaw separation 2 in/min, tested at 25°C / 50%RH.

Young's Modulus	300 MPa	View 
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Test Method: ASTM D638

Notes: Type V dogbone. Jaw separation 2 in/min, tested at 25°C / 50%RH.

Overlap Shear Strength	32 MPa	View 
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Substrate: Al to Al

Notes: 0.5in x 1.0in bond area, 6 mil thickness. Separation rate 0.1 in/min for metals and 2 in/min for metal to plastics. AL etched, steel grit blasted prior to bonding. Plastic and steel wiped with IPA prior to bonding. AL substrate thickness 0.0625in.

Overlap Shear Strength	23 MPa	View 
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Substrate: Al to SUS

Notes: 0.5in x 1.0in bond area, 6 mil thickness. Separation rate 0.1 in/min for metals and 2 in/min for metal to plastics. AL etched, steel grit blasted prior to bonding. Plastic and steel wiped with IPA prior to bonding. AL substrate thickness 0.0625in.

Overlap Shear Strength

6 MPa

View 

Substrate: Al to PC/ABS

Notes: 0.5in x 1.0in bond area, 6 mil thickness. Separation rate 0.1 in/min for metals and 2 in/min for metal to plastics. AL etched, steel grit blasted prior to bonding. Plastic and steel wiped with IPA prior to bonding. AL substrate thickness 0.0625in.

Overlap Shear Strength

10 MPa

View 

Substrate: Al to PC

Notes: 0.5in x 1.0in bond area, 6 mil thickness. Separation rate 0.1 in/min for metals and 2 in/min for metal to plastics. AL etched, steel grit blasted prior to bonding. Plastic and steel wiped with IPA prior to bonding. AL substrate thickness 0.0625in.

Overlap Shear Strength

15 MPa

View 

Substrate: Al to 30% Glass Filled PC (Lexan®)

Notes: 0.5in x 1.0in bond area, 6 mil thickness. Separation rate 0.1 in/min for metals and 2 in/min for metal to plastics. AL etched, steel grit blasted prior to bonding. Plastic and steel wiped with IPA prior to bonding. AL substrate thickness 0.0625in.

Overlap Shear Strength

9 MPa

View 

Substrate: Al to 50% Glass Filled Polyamide(Kalix®)

Notes: 0.5in x 1.0in bond area, 6 mil thickness. Separation rate 0.1 in/min for metals and 2 in/min for metal to plastics. AL etched, steel grit blasted prior to bonding. Plastic and steel wiped with IPA prior to bonding. AL substrate thickness 0.0625in.

Overlap Shear Strength

32 MPa

View 

Dwell/Cure Time: 72.0
Dwell Time Units: hr
Substrate: Al to Al

Notes: * % retention relative to control

Overlap Shear Strength

(Substrate Failure) 6 MPa

View 

Dwell/Cure Time: 72.0
Dwell Time Units: hr
Substrate: Al to PC/ABS

Notes: * % retention relative to control

Overlap Shear Strength

(100%*) 31 MPa

View 

Dwell/Cure Time: 72.0
Dwell Time Units: hr
Substrate: Al to Al

Notes: * % retention relative to control

Overlap Shear Strength

(Substrate Failure, 66%*) 4 MPa

View 

Dwell/Cure Time: 72.0
Dwell Time Units: hr
Substrate: Al to PC/ABS

Notes: * % retention relative to control

Overlap Shear Strength

(91%*) 29 MPa

View 

Dwell/Cure Time: 72.0
Dwell Time Units: hr
Substrate: Al to Al

Notes: * % retention relative to control

Overlap Shear Strength

(Substrate Failure, 133%*) 8 MPa

View 

Dwell/Cure Time: 72.0
Dwell Time Units: hr
Substrate: Al to PC/ABS

Notes: * % retention relative to control

Available Sizes

30 mL syringe, 8 oz cartridge

Storage and Shelf Life

The shelf life of 3M™ One-Part Epoxy Adhesive 6101 Off-White is 18 months from the date of manufacture when stored in the original packaging materials and stored at -20°C (-4°F).

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Safety Data Sheet: Consult Safety Data Sheet before use.

Regulatory: For regulatory information about this product, contact your 3M representative.

Experimental Product: This 3M product is an experimental or developmental product that has not been introduced or commercialized for general sale, and its formulation, performance characteristics and other properties, specifications (if any), availability, and pricing are not guaranteed and are subject to change or withdrawal without notice.

Bottom Matter

3M

Electronics Materials Solutions Division

3M Center, Building 224-3N-11

St. Paul, MN 55144-1000

1-800-251-8634 phone
651-778-4244 fax
www.3M.com/electronics

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Handling/Application Information

Application Examples

- Mobile device bonding
- Wearable electronic device bonding
- Electronic Assembly

Application Techniques

- Dispensing
- Jetting
- Screen or stencil printing

Directions for Use

Thaw for one to two hours at room temperature before using. Do not heat syringe above 27°C when warming.

References

Property	Values
3m.com Product Page	https://www.3m.com/3M/en_US/p/d/b5005092139/
Safety Data Sheet SDS	https://www.3m.com/3M/en_US/company-us/SDS-search/results/?gsaAction=msdsSRA&msdsLocale=en_US&co=ptn&q=6101 Off-White

Family Group

Link Tags:

- 6101 Off-White

Products

6101 Off-White

Information

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