



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
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Notes: Colors may vary from nearly white to yellow/amber. Adhesive performance is not affected by color variation.

UV Tracer	Yes	
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Viscosity	50000 cP	View
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Notes: Cone and Plate, RT, 5Hz, 25mm SS plates, 0.0989 rad cone

Halogens (Cl, Br)	Representative samples have been tested and meet the chlorine and bromine content requirements of IEC 61249-2-21	View
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Notes: Per IEC 61249-2-21

Pot Life	> 4 weeks	View
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Notes: Time to double viscosity measure by cone and plate rheometer.


Viscosity	50000 cP	View ^
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 ^
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 ^
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 ^
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 ^
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 ^

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

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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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