



1581

1581 is a one-component alcohol cure RTV silicone sealant. A non-sag material with excellent heat resistance for use in industrial and electronics applications. 1581 has very good adhesion to a wide range of unprimed substrates. High performance with fast and excellent adhesion to glass, aluminum alloy etc. It can be used for a variety of electronics bonding, encapsulation and sealing applications. This material is certified by UL to pass HB flame rating testing. This material performs at temperatures ranging from -55°C to 210°C.

Technology / Base	Poly(dimethyl) Siloxane
Type of Product	Silicone Sealant
Components	One Part
Curing	Alcohol Moisture Cure
Appearance / Color	White
Consistency	Thixotropic Paste

Features and Benefits

- Excellent heat resistance properties
- Super resistance to ultra violet(UV) and weather
- Excellent performance in insulation, thermal cycling, damp-heat, damp-freezing
- Wide operating temperature range
- Easy to use for reworkable applications
- Alcohol cure low/no odor
- RoHS compliant
- Halogen free

Technical Data

Physical Property	Value	Condition/Method
Rheology		
Viscosity	Thixotropic Paste	
Density		
Specific Gravity	1.37	
Uncured Material Characteristics		
Tack Free Time	15 Min	
Full Cure Time	24 hr ≥ 2mm	23±2°C and 50±5%RH
Cured Material Performance		
Thermal Service Range	-54 to 210°C	
Hardness	37 Shore A	ISO7619, GB/T531, 23±2°C 50% RH
Tensile Strength	2.1 MPa	ISO37, GB/528, 23±2°C 50% RH
Elongation to Break	380%	ISO37, GB/528, 23±2°C 50% RH
Lap Joint Shear Strength Aluminum	1.2 MPa	ISO4587, GB7124, 23±2°C 50% RH
Electrical Properties		
Volume Resistivity	3.0 x 10 ¹⁵ Ωcm	IEC60093, GB/T1692
Breakdown Voltage	20 kV/mm	IEC 60243-1, GB/T1695
Damp Heat Aging Testing		
Elongation at Break	300%	85°C, 85% RH for 1000 hr ISO37, GB/528, 23±2°C 50% RH
Tensile Strength	1.3 MPa	ISO37, GB/528, 23±2°C 50% RH

Test Sample Conditions: 2mm Thickness, Cured at 23±2°C, 50±5%RH for 7 days. Tested at 23±2°C



Typical Applications

- Electrical insulation
- Protects leads from mechanical shock
- Electronics encapsulation
- Sealing the solar cell side frames
- Sealing/adhesive solar cell junction boxes
- Sealing solar energy lamps
- Sealing and waterproofing for transformer

Curing Conditions

Cure speed will vary with temperature, relative humidity, depth of material and presence of moisture. Some applications may require special surface preparation. At 23±2°C, 50±5% relative humidity, typical cure depth is 2mm in 24 hours. Requires more time to cure in colder or lower humidity conditions. Contact H.B. Fuller Company technical support for additional curing recommendations.

Storage and Shelf Life

Product shall be ideally store in a cool, dry area in unopened containers. Material should be stored at a temperature of 8-25°C. Optimal storage is at the lower half of this temperature. Do not return unused material back into the container.

General Instructions

- For best performance bond surfaces should be clean, dry and free of any contaminants and oils.
- Apply a continuous and even bead of silicone to one surface.
- Assemble parts immediately. Remove excess material at once.

Note

The values noted in this data sheet are typical properties only and are not intended to be used as material specifications. For assistance in writing a material specification, please contact H.B. Fuller Company for further details.

Ordering Information

Stock No. 15810102, 310ml Cartridge

Safety and Disposal

For complete safety and handling information, please refer to the appropriate Safety Data Sheets prior to using this product.

H.B. Fuller Company,
Beijing Tonsan Adhesive Co., LTD.
5 Shuangyuan Rd.
Badachu High-Tech Zone
100041, Beijing, China

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