

## AS3145

### Product Description:

AS3145 is a high strength, neutral curing silicone RTV adhesive rubber developed for applications requiring fast development of physical properties and fast unprimed adhesion.

AS3145 is a 1 part silicone that when applied to the substrate allows handling of the bonded assembly within an hour.

AS3145 works well in manual and automatic dispensing equipment.

### Product Features:

- Fast Room Temperature Cure
- Thixotropic paste
- Excellent unprimed adhesion to plastic, metal glass
- Fast onset of adhesion
- Non-corrosive

### Replacement For:

GE 162 and Dow DC3145. Tested to requirements of MIL-A-46146 Type I Group II material

### Packaging:

Available in standard 3 oz. tubes and 10.3 oz. cartridges. Other size packaging available upon request.

*This document contains propriety information and is not to be transmitted, reproduced or disclosed to anyone without written permission of Aerospace Sealants*

## High Strength Neutral Cure Silicone RTV Adhesive Sealant

### Typical Properties:

#### UNCURED

Color:	Translucent
Viscosity, cps	500,000
Specific Gravity	1.12
Consistency	Thixotropic paste
Working time, mins. @ R.T.	8
Tack Free Time, mins. @ R.T.	15
Application Rate, 90 PSI, g/min.	300

#### CURED – ROOM TEMPERATURE

Cured – 72 hrs. @ R.T.

Tensile Strength, PSI	900
Elongation, %	800
Durometer, Shore A	50
Peel Strength, PPI	100
Tear Strength, PLI	200

#### Electrical

Dielectric Strength, v/mil	790
Dielectric Constant	2.6
Dissipation Factor	0.0009
Volume Resistivity, ohm/cm	$1.8 \times 10^{15}$

#### Thermal

Brittle Point, °F (°C)	-68 (-55)
Maximum Continuous Operating Temperature, °F (°C)	500(260)
Maximum Intermittent Operating Temperature, °F (°C)	600(315)
Thermal Conductivity Btu/hr/ft <sup>2</sup> , °F/ft	0.17
Coefficient of Expansion in/in/°F	$7.8 \times 10^{-4}$

## **Application Instruction Sheet** for **AS3145 and AS3145P**

Clean surface and dry thoroughly. If using the optional "Tube Nozzle", cut to desired bead size. Push sealant ahead by squeezing tube for uniform bead. The paste-like consistency makes it easy to be tooled using a spatula or wooden paddle. Tooling time, approximately 10 minutes at Room Temperature. TACK FREE approximately 60 minutes at Room Temperature. Normal Room Temperature cure time is 24 hours. Length of time for a full cure depends on thickness of application and other factors including temperature and humidity. Accelerated cure may be achieved using hot air. A 1 minute hot air stream exposure, followed by a 1 minute cool down in a humid environment, results in a cured elastomer condition, with good adhesion. Test the exposure time on a sample prior to final application for adhesion. For larger cross section applications, the AS3145P product may be better suited using accelerated curing.

Primerless adhesion to many metals including aluminum, stainless steel, steel, glass, ceramics, silicone rubber and some rigid plastics. This material may also bond to some organic rubbers and flexible plastics not containing blooming (those that migrate to the surface) type plasticizers. NOTE: Due to this product's Neutral cure it can be used for bonding and sealing of electronic components onto printed circuit boards and protecting copper connections on electronic parts assembly. Not for use on stovepipes, fireplaces or underwater. For industrial use only. KEEP OF REACH OF CHILDREN.

### **FAA PMA Approved Products**

Approved Eligibility for Pratt & Whitney, Rolls Royce, Canadair, Boeing, Fokker,  
GE Engines, CFM Engines, Bombardier, McDonnell, Douglas/Boeing, Hamilton Sunstrand,  
Dowty and Airbus  
ALL MODELS



## MATERIAL SAFETY DATA SHEET (MSDS)

**PRODUCT:** AS3145 High Strength Silicone RTV

**1. Chemical Product and Company Identification**

**Manufactured By:** Silicone Solutions (SS-3146 REF.)  
 1670-C Enterprise Parkway  
 Twinsburg, Ohio 44087

**Emergency Phone:** 330-405-4595

**Revised:** 08-16-03  
**Preparer:** David M. Brassard  
**Chemical Family:** Silicone Rubber  
**Formula:** Mixture

**2. Composition / Information on Ingredients**

Product Composition CAS Reg. No.	Approx. % Wt.	ACGIH TWA	TLV STEL	OSHA TWA	PEL STEL	Units
<b>A. HAZARDOUS</b>	<b>NONE FOUND</b>					
<b>B. NON HAZARDOUS</b>						
Polydimethylsiloxane silanol terminated 70131-67-8	45-60	NE	15	NE	NE	NA
Polydimethylsiloxane trimethyl terminated 63148-62-9	10-29	--	NE	--	NE	NA
Vinyl oximino silane 2224-33-1	1-5	NE	NE	NE	NE	NA
Modified silicone dioxide 68611-44-9	5-20	6	10	6	10	mg/m3
Trade Secret Component	1-5	NF	NE	NF	NE	NA
Aminosilane 919-30-2	0-2	NE	NE	NE	NE	NA
Calcium Carbonate 471-34-1	15-35	10	15	5	15	mg/m3

**3. HAZARDS IDENTIFICATION**

**Potential Health Effects:**

Ingestion: ----- NONE KNOWN

Skin Contact: ----- MAY CAUSE MILD SKIN IRRITATION. MANUFACTURING EXPERIENCE HAS SHOWN THAT SKIN HAZARD IS NOT APPLICABLE IN THIS FORM.

Inhalation: ----- NONE KNOWN

Eye Contact: ----- MAY CAUSE MILD EYE IRRITATION.

Medical Conditions Aggravated: ----- NONE KNOWN

Subchronic (TARGET ORGAN) Effects: ----- NONE KNOWN

Chronic Effects/Carcinogenity: ----- THIS PRODUCT OR ONE OF IT'S INGREDIENTS PRESENT 0.1% or MORE IS NOT LISTED OR SUSPECTED AS A CARCINOGEN BY NTP, IARC OR OSHA

Principle Routes of Exposure: ----- NONE KNOWN

Other: ----- This product contains methylpolysiloxanes which can generate formaldehyde upon exposure above 300 degrees Centigrade in atmospheres which contain oxygen. Formaldehyde is a skin, eye, and throat irritant.

**4. FIRST AID MEASURES**

Ingestion: ----- NONE KNOWN  
 Skin: ----- WASH WITH SOAP AND WATER.  
 Inhalation: ----- NONE KNOWN  
 In case of eye contact: ----- FLUSH WITH WATER FOR 15 MINUTES AND GET  
 MEDICAL ATTENTION IF IRRITATION PERSISTS.  
 Note to physician: ----- NONE KNOWN

**5. FIREFIGHTING MEASURES**

Flash point: ----- >300°C or 600°F  
 Autoignition temp. ----- NA  
 Flammable limits in air - upper % ----- NA  
 Sensitivity to mechanical impact: ----- NO  
 Sensitivity to static discharge: ----- NO  
 Extinguishing media: ----- ALL STANDARD FIREFIGHTING MEDIA  
 Special firefighting procedures: ----- NONE KNOWN

**6. ACCIDENTAL RELEASE MEASURES**

Action to be taken if material is released or spilled: ----- SCRAPE-UP and PLACE IN AN INERT  
 MATERIAL FOR DISPOSAL

**7. HANDLING and STORAGE**

Precautions to be taken during handling and storage: ----- CURE ONLY WHERE APPROPRIATE  
 VENTILATION SYSTEMS EXIST.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

Engineering controls: ----- NONE KNOWN  
 Respiratory protection: ----- NONE REQUIRED  
 Protective gloves: ----- CLOTH GLOVES  
 Eye and face protection: ----- SAFETY GLASSES  
 Other protective equipment: ----- NONE REQUIRED  
 Ventilation: ----- CURE IN WELL VENTILATED AREAS

**9. PHYSICAL and CHEMICAL PROPERTIES**

Boiling point: ----- NA  
 Vapor pressure: ----- NA  
 Vapor density: ----- NA  
 Freezing point: ----- NA  
 Melting point: ----- NA  
 Physical state: ----- PASTE  
 Odor: ----- MILD  
 % Volatile by volume: ----- <1  
 Evaporation rate: ----- <1  
 Specific gravity: ----- 1.30  
 Density: (Kg/M3) ----- 1300  
 Acid/alkalinity ----- UNKNOWN  
 PH: ----- NA  
 VOC: ----- NT  
 Solubility in water: ----- INSOLUBLE  
 Solubility in organic solvents: ----- PARTIALLY SOLUBLE IN TOLUENE

