

IS806

IS806 High Temperature Silicone Rubber Adhesive Sealant

Product Description IS806 one-component, ready-to-use silicone adhesive sealant has a paste-like consistency and cures to silicone rubber on exposure to atmospheric moisture at room temperature. It has a maximum continuous operating temperature of 260C and a maximum intermittent operating temperature of 315C. Because this paste-consistency product will flow only with external pressure, it may be applied to horizontal, vertical and overhead surfaces in thicknesses up to 6mm. It has sufficient uncured body to adhere small objects while cure is taking place.

IS806 adhesive sealant utilizes a moisture vapour cure system and releases acetic acid vapours from the sealant surface as a by-product of cure.

Key Performance Properties

- -60C to 260C continuous operating temperature range
- One-component
- Thixotropic paste-consistency
- Room temperature cure
- Excellent electrical insulation properties
- Excellent resistance to weather, ozone, UV and chemicals

Applications

The paste-like consistency of IS806 adhesive sealant makes it ideally suited for application to vertical and overhead surfaces where use of pourable self-leveling sealants would not be practical. This paste-consistency silicone sealant may be used in thicknesses up to 6mm for bonding and sealing, joining metals and plastics, and electrical insulation.

For applications requiring sealant thicknesses greater than 6 mm, Momentive performance materials two component silicone rubber compounds are recommended.

Typical Product Data

Typical Uncured Properties	
Colour	Red
Consistency	Paste
Density, g/cm ³	1.05
Application Rate, g/min	440
Tack Free Time, min	30
Typical Cured Properties	
	IS806
Hardness, Shore A ⁽¹⁾	22
Tensile Strength, MPa ⁽¹⁾	1.7
Elongation, % ⁽¹⁾	425
Peel Strength, N/mm ⁽²⁾	5.4
Electrical:⁽³⁾	
Dielectric Strength, kV/mm	20
Dielectric Constant @ 60 Hz	2.9
Dissipation Factor @ 60 Hz	0.002
Volume Resistivity,ohm.cm	2.2x10 ¹⁴

Thermal:(3)	
Thermal Conductivity, W/m.K	0.21
Coefficient of Expansion,cm/cm, °C	3.06x10 ⁻⁴

(1) Cure time 3 days at 25C /50% relative humidity.

(2) Cure time 7 days at 25C /50% relative humidity.

(3) Information is provided for customer convenience only. Property is not tested on a routine basis.

Specifications

Typical product data values should not be used as specification. Assistance and specifications are available by contacting Momentive performance materials Technical Service RTV1 and RTV2.

Agency Status

IS806 adhesive sealant is recognized by Underwriters Laboratories, Inc. under their Component Recognition Program (UL File No. E-36952).

Instructions for Use

Surface Preparation

IS806 adhesive sealant will bond to many clean surfaces. These surfaces typically include many metals, glass, ceramic, silicone rubber and some rigid plastics. This silicone adhesive sealant will also produce fair bonds to organic rubber and to some flexible plastics not containing fugitive plasticizers (which migrate to the surface impairing adhesion). An evaluation should be made to determine bond strength for each specific application. For difficult-to-bond substrates, use of a primer is suggested. Momentive performance materials primers such as SS4004P, SS4044P and SS4179, are recommended for use with this adhesive sealant. If the evaluation of IS806 indicates that greater adhesion levels are required, Momentive performance materials RTV106 sealant should be considered. Complete information with usage instructions for primers and RTV products are contained in separate product data sheets. For optimum adhesion, surfaces should be thoroughly cleaned with a suitable solvent to remove dirt, oil and grease. The surface should be wiped dry before applying the silicone sealant.

When solvents are used, proper safety precautions must be observed. All solvents must be considered toxic and must be used only in well ventilated areas. Exposure to high vapour concentration must be avoided. When flammable solvents are used, storage, mixing and use must be in areas away from heat, sparks, open flames or other sources of ignition.

PACKAGING AND DISPENSING

IS806 silicone adhesive sealant is supplied ready-to-use in collapsible aluminum squeeze tubes, caulking cartridges, and in bulk containers. Collapsible aluminum tubes may be squeezed by hand or with the aid of mechanical wringers which allow more complete removal of material from the tube. Air-operated dispensing guns may also be used with aluminum tubes and offer the advantages of improved control and faster application for production line use. Adhesive sealants may be dispensed from caulking cartridges using simple mechanical caulking guns or air operated guns. Air-operated guns will allow greater control and application speed. Both tubes and cartridges are easy to use, can be put into production quickly and require minimum capital investment.

Bulk containers require a larger initial investment in dispensing equipment, but offer economical packaging for volume production. Bulk dispensing systems are air-operated extrusion pumps coupled to hand or automated dispensing units.

Pumps which are specifically designed for pumping one-component RTV silicone rubber have TEFLON seals, packings and TEFLON lined hoses to prevent moisture permeation and pump cure problems

Note: Do not exceed 3 bar when using air-powered caulking guns.

Application and Cure Time Cycle

Momentive performance materials paste-consistency silicone adhesive sealants may be applied directly to the clean (or primed) substrate. Where broad surfaces are to be mated, the adhesive sealant should be applied in a thin, less than 6mm diameter, bead or ribbon around the edge of the surface to be bonded.

The cure process begins with the formation of a skin on the exposed surface of the adhesive sealant and progresses inward through the material. At 25C and 50% relative humidity, these products will form a surface skin which is typically tack-free to the touch in about 30 minutes. Once the tack-free skin has begun to form, further tooling of the silicone adhesive is not advisable. High temperatures and high humidity will accelerate the cure process. Low temperatures and low humidity will slow the cure rate.

As the silicone adhesive sealant cures, acetic acid vapours are released from the adhesive sealant surface. The odor of acetic acid will disappear when the cure is completed.

In addition to the effects of temperature and relative humidity, development of maximum physical properties will depend on joint configuration, degree of confinement, sealant thickness and substrate porosity.

A 3mm section of silicone adhesive sealant will cure through in approximately 24 hours at 25C, and 50% relative humidity. Since cure time increases with thickness, use of IS806 silicone adhesive sealant should be limited to thicknesses of 6mm or less.

Normally, sufficient strength will develop in 12 to 24 hours to permit handling of parts. Minimum stress should be applied to the silicone sealant until full physical properties are developed.

CLEAN UP AND REMOVAL

Before cure, solvent systems such as naphtha or methyl ethyl ketone (MEK) are most effective. Refer to solvent use warning in the section on surface preparation. After cure, selected chemical strippers which will remove the silicone rubber are available from other manufacturers. Specific product information may be obtained on request.

Handling and Safety

These products are manufactured and marketed for industrial use only. Material Safety Data Sheets are available upon request from Momentive performance materials. Similar information for solvents and other chemicals used with the Momentive performance materials products should be obtained from your supplier.

Storage and Warranty Period

The warranted shelf life will be indicated by the 'use before date' on the associated documents with a minimum of 4 months when stored in the original unopened containers below 27° C.

Availability

IS 806 is available in 85 gr. tubes, 310 ml cartridges and in 18 kg pails as well as in drums of 204 kg.



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	• UA, Silanes, Resins, and Specialties	T 800.334.4674	F 304.746.1623
	• RTV Products-Elastomers	T 800.332.3390	F 304.746.1623
	• Sealants and Adhesives & Construction	T 877.943.7325	F 304.746.1654
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