



# Technical Data Sheet

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## IS806

### 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 260°C (500°F) and a maximum intermittent operating temperature of 315°C (600°F). 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 (¼ in.). It has sufficient uncured body to adhere small objects while cure is taking place.

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

### Key Features and Benefits

- -60°C to 260°C (-75°F to 500°F) continuous operating temperature range
- One-component
- Thixotropic paste-consistency
- Room temperature cure
- Excellent electrical insulation properties
- Excellent resistance to weather, ozone, UV and chemicals

### Typical Physical Properties

Typical Uncured Properties	IS806
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Color	Red
Consistency	Paste
Specific Gravity	1.05
Application Rate, gm/min	440
Tack Free Time, Minutes	30
<b>Typical Cured Properties</b>	<b>IS806</b>
<b>Mechanical:</b>	
Hardness, Shore A <sup>(1)</sup>	22
Tensile Strength, kg/cm <sup>2</sup> (lb/in <sup>2</sup> ) <sup>(1)</sup>	17.6 (250)
Elongation, % <sup>(1)</sup>	425
Peel Strength, kg/cm (lb/in) <sup>(2)</sup>	5.4 (30)
<b>Electrical:</b> <sup>(3)</sup>	
Dielectric Strength, kv/mm (v/mil)	20 (500)
Dielectric Constant @ 60 Hz	2.9
Dissipation Factor @ 60 Hz	0.002
Volume Resistivity,ohm-cm	2.2x10 <sup>14</sup>
<b>Thermal:</b> <sup>(3)</sup>	
Thermal Conductivity, cal/sec/cm <sup>2</sup> , °C/cm (BTU/hr/ft <sup>2</sup> , °F/ft)	0.0005 (0.12)
Coefficient of Expansion,cm/cm, °C (in/in, °F)	3.06x10 <sup>-4</sup> (1.70x10 <sup>-4</sup> )

- <sup>(1)</sup> Cure time 3 days at 25° (77°F) /50% relative humidity.
- <sup>(2)</sup> Cure time 7 days at 25°C (77°F)/50% relative humidity.
- <sup>(3)</sup> Information is provided for customer convenience only. Property is not tested on a routine basis.

## Potential 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 (¼ in.) for bonding and sealing, joining metals and plastics, and electrical insulation.

For applications requiring sealant thicknesses greater than 6 mm (¼ in.), Momentive Performance Materials two component silicone rubber compounds are recommended.

## Patent Status

Nothing contained herein shall be construed to imply the nonexistence of any relevant patents or to constitute the permission, inducement or recommendation to practice any invention covered by any patent, without authority from the owner of the patent.

## Product Safety, Handling and Storage

Customers should review the latest Safety Data Sheet (SDS) and label for product safety information, safe handling instructions, personal protective equipment if necessary, emergency service contact information, and any special storage conditions required for safety. Momentive Performance Materials (MPM) maintains an around-the-clock emergency service for its products. SDS are available at [www.momentive.com](http://www.momentive.com) or, upon request, from any MPM representative. For product storage and handling procedures to maintain the product quality within our stated specifications, please review Certificates of Analysis, which are available in the Order Center. Use of other materials in conjunction with MPM products (for example, primers) may require additional precautions. Please review and follow the safety information provided by the manufacturer of such other materials.

## Processing Recommendations

### 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 vapor 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 45 psig 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 (1/4 in.) 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 25°C (77°F) 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.

Elevated ambient temperature and humidity will accelerate the cure process. Low ambient temperatures and humidity will slow the cure rate.

As the silicone adhesive sealant cures, acetic acid vapors 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 (1/8 in.) section of silicone adhesive sealant will cure through in approximately 24 hours at 25C (77F), and 50%

relative humidity. Since cure time increases with thickness, use of IS806 silicone adhesive sealant should be limited to thicknesses of 6mm (¼ in.) 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.

## **Limitations**

Customers must evaluate Momentive Performance Materials products and make their own determination as to fitness of use in their particular applications.

## **Specifications**

### **AGENCY STATUS**

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

### **Contact Information**

For product prices, availability, or order placement, contact our customer service at [Momentive.com/Customerservice/](https://www.momentive.com/Customerservice/)

For literature and technical assistance, visit our website at: [www.momentive.com](https://www.momentive.com)

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