

# SILTRUST™ RTV560-XB Adhesive and Sealant

## Product Description

SILTRUST RTV560-XB is a non-sag, two-part silicone that can retain its elastomeric properties through a wide temperature range. RTV560-XB is used with a paste catalyst in a 10:1 by volume mix ratio for ease of use, especially in meter mix systems. When used with a primer, RTV560-XB shows good adhesive strength. Potential applications include bonding both rigid and flexible thermal protection systems, adhering thermal blankets and other materials requiring resistance to extreme high and low temperatures.

## Key Features and Typical Benefits

- Long working time at 25°C (77°F) and 50% relative humidity
- Good adhesion with primer
- Room temperature cure
- Composition free of solvents and solvent odor
- Convenient 10:1 by volume mix ratio for meter mixing at large volumes
- Non-sag when applied vertically up to thicknesses of 0.050 inches thick
- RTV560-XB can be used at temperatures from -115°C (-175°F) up to 260°C (500°F) continuously and up to 316°C (600°F) for short periods of time

## Typical Physical Properties

| Uncured Properties                                                          | SILTRUST™ RTV560-XB                                                          |               |
|-----------------------------------------------------------------------------|------------------------------------------------------------------------------|---------------|
|                                                                             | RTV560-XB (A)                                                                | RTV560-XB (B) |
| Appearance/Color                                                            | Red                                                                          | White         |
| Consistency                                                                 | Semi-Flowable                                                                | Paste         |
| Specific Gravity                                                            | 1.54                                                                         | 1.18          |
| Mix Ratio by Volume (A:B)                                                   | 10:1                                                                         |               |
| <b>Typical Cured Properties</b>                                             | Cured 7 days at 25°C (77°F) and 50% relative humidity unless otherwise noted |               |
| Work Life, at 25°C (77°F) and 50% RH, minutes                               | 435                                                                          |               |
| Tack Free Time, at 25°C (77°F) and 50% RH, minutes                          | 450                                                                          |               |
| Work Time, at 49°C (120°F) and 80% RH, minutes                              | 75                                                                           |               |
| Tack Free Time, at 49°C (120°F) and 80% RH, minutes                         | 68                                                                           |               |
| Work Time, at 7°C (45°F) and 50% RH, hours                                  | 19.5                                                                         |               |
| Tack Free Time, at 7°C (45°F) and 50% RH, hours                             | 21                                                                           |               |
| Tensile Strength <sup>†</sup> , psi (MPa)                                   | 843 (5.8)                                                                    |               |
| Tensile Elongation <sup>†</sup> , %                                         | 86                                                                           |               |
| Adhesion to 2024-T3 Aluminum at room temperature <sup>† ‡</sup> , psi (MPa) | 512 (3.5)                                                                    |               |
| Coefficient of Thermal Expansion above T <sub>g</sub> , μm/m/°C             | 287                                                                          |               |
| Specific Heat, J/g ° C measured at 20°C                                     | 0.948                                                                        |               |

Typical properties are average data and are not to be used as or to develop product specifications.

<sup>†</sup>: Cured 7 days at 23°C (73°F) and 50% relative humidity

<sup>‡</sup>: Acid etched and SS4004P primed bare 2024-T3 Aluminum. Nominal 0.025 inch thick bond line

## **Mixing**

RTV560-XB is a two-part material that requires thorough mixing. Select a mixing container 4 to 5 times larger than the volume of RTV silicone rubber compound to be used. Weigh out the RTV silicone rubber base compound and add the appropriate amount of curing agent.

Using clean tools, thoroughly mix the RTV base compound and the curing agent, scraping the sides and bottom of the container carefully to produce a homogeneous mixture. When using power mixers, avoid excessive speeds which could entrap large amounts of air or cause overheating of the mixture, resulting in shorter pot life.

## **Deaeration**

Air entrapped during mixing should be removed to eliminate voids in the cured product. Expose the mixed material to increasing vacuum levels, increasing up to 29 inches of mercury, if possible. The material will expand, crest, and recede to about the original level as the bubbles break. Degassing is usually complete about two minutes after frothing ceases. When using the RTV silicone rubber compound for potting, a deaeration step may be necessary after pouring to avoid capturing air in complex assemblies

## **Curing**

Using RTV560-XB curing agent in a 10:1 A:B ratio by volume, this RTV silicone rubber compound will cure in about 24 hours at 25°C (77°F) and 50% relative humidity to form a durable resilient rubber. The material will still cure at temperatures beyond 25°C (77°F), see above table, but cure time and working time will be altered.

## **Bonding**

If adhesion is an important application requirement, RTV560-XB silicone rubber can be used with a primer to offer adhesive strength to different substrates. Thoroughly clean the substrate with a non-oily solvent, such as isopropanol or toluene, and let dry. Then apply a uniform thin film of a suitable silicone primer and allow the primer to air dry for one hour or more. Finally, apply freshly catalyzed RTV silicone rubber compound to the primed surface and cure as 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.

## **Limitations**

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

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