

SILTRUST™ RTV6432 Encapsulating Silicone

Product Description

SILTRUST RTV6432 is a one-part, addition cure, silicone encapsulant with adhesion, that is a blend of SNAPSIL™ TSE322 and SNAPSIL™ RTV6424. This silicone rubber will bond to many substrates without a primer and will cure rapidly at elevated temperatures. RTV6432 is a semi-flowable paste designed for applications where adhesive flow should be controlled. Work life of RTV6432 is long at room temperature but will not cure completely until exposed to elevated temperatures. Applications may include electronic component staking or encapsulating.

Key Features and Typical Benefits

- Simple Processing
 - One component product – no mixing required
 - Long working time at 77F/50%RH
 - Fast cure at elevated temperature
- Primerless adhesion to many substrates
- No cure byproducts, low linear shrinkage
- Excellent dielectric properties
- Non-corrosive to metals and sensitive substrates

Typical Physical Properties

Uncured Properties	RTV6432
Consistency	Semi-flowable paste
Color	Light blue
Viscosity#, cPs	502,000
Specific Gravity	1.23
Vertical Flow, Inches after 5 minutes	1.2
Application Rate 1, grams/minute	180
Typical Cured Properties	Cured at 150°C for 1 hour
Hardness, Shore A	37
Tensile Strength, MPa, (psi)	3.3 (487)
Elongation, %	271
Lap Shear Strength ‡, MPa, (psi)	2.7 (386)
Dielectric Strength, Volts/mil	471
Dielectric Constant	2.95
Dissipation Factor	0.003
Volume Resistivity, Ω-cm	1.26 x 10 ¹⁵

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

#: Brookfield Viscometer, HAT Spindle #7, 5 r.p.m

1: 90 psi through 0.125 inch diameter orifice

‡: Primerless AL 2024-T3

Compatibility

RTV6432 silicone rubber compound will cure in contact with most clean, dry surfaces. However, certain materials, such as butyl and chlorinated rubber, sulfur-containing materials, amines, and certain metal soap-cured RTV

silicone rubber compounds, can cause cure inhibition. Cure inhibition is characterized by a gummy appearance of the RTV silicone rubber compound at the interface between it and the substrate. It is recommended that a sample patch test be performed with RTV6432 silicone rubber compound to determine if a barrier coating or other inhibition preventing measures are necessary before applying material to a desired surface.

Surface Preparation

The adhesive performance of any polymer system is highly dependent upon proper surface preparation. In order to maximize the adhesion of SILTRUST RTV6432 silicone adhesive and minimize the potential for cure inhibition, all parts should be as clean and dry as possible prior to the application of the adhesive.

Bonding

SILTRUST RTV6432 silicone adhesive offers outstanding adhesion characteristics to a wide variety of different substrates without the need of a primer. For difficult-to-bond-to substrates, or where more aggressive chemical adhesion is desired, the adhesion may be enhanced by using SS4155 silicone primer, available from Momentive Performance Materials. To apply the primer, thoroughly clean the surface and let dry. Then apply a uniform film of SS4155 silicone primer and allow the primer to air-dry for one hour or more. For more details on priming and adhesion, please refer to Momentive Performance Materials product data sheet on silicone primers.

Curing

RTV6432 silicone encapsulant requires the use of elevated temperatures to achieve full cure. Typical cure time and temperature is 1 hour at 150°C. The actual cure time is affected by considerations such as cross-sectional thickness of the RTV6432 silicone, heat capacity of the overall assembly and efficiency and type of oven used (i.e. convection, infrared).

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 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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