

SILTRUST™ TSE3064H SILICONE GEL

Product Description

SILTRUST TSE3064H is a two-component, low viscosity, 1 to 1 mix ratio, dielectric silicone gel used primarily for electronics potting applications. Once mixed, this product cures at room temperature to a soft rubber / hard gel. The cure time can be accelerated with heat. The soft nature and cushioning effect of this product can provide excellent protection for electronic assemblies from external humidity, mechanical shock and vibration. Due to its low viscosity, this material can potentially improve throughput on the assembly line.

Key Features and Typical Benefits

- Soft, low modulus elastomeric properties
- Convenient 1:1 mix ratio by weight
- Lower viscosity, easily pourable
- Outstanding stress relief
- Mechanical shock / vibration dampening
- Excellent dielectric properties
- Probe testable, self-healing, repairable
- Heat accelerated (IR, oven, etc.) or room temperature cure

Potential Applications

- Electrical and electronic potting such as power modules and hybrid IC
- Potting of high voltage parts

Typical Physical Properties

| UNCURED PROPERTIES | | |
|-------------------------|-------------------|---------------------------------|
| Appearance (Part A & B) | | Transparent to very pale yellow |
| Mix ratio by weight | | 1 : 1 |
| Viscosity Part A | mPaxs | 400 |
| Viscosity Part B | mPaxs | 280 |
| Viscosity after mixing | mPaxs | 370 |
| Density (23°C) – Part A | g/cm ³ | 0,97 |
| Density (23°C) – Part B | g/cm ³ | 0,97 |
| Work Life at 23°C | Minutes | ≥120 |

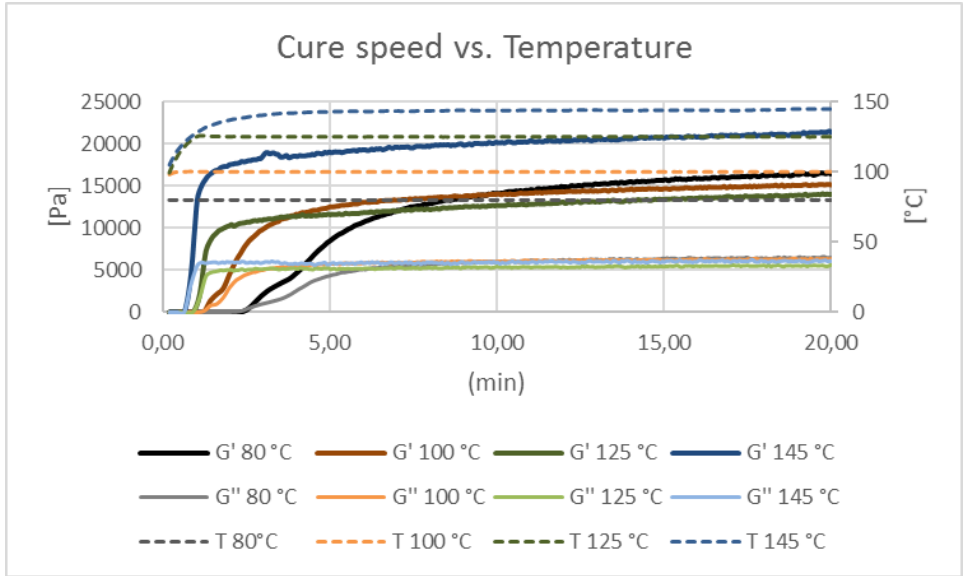
| CURED PROPERTIES (30 minutes @ 120°C) | | |
|---------------------------------------|-------------------|---------------------------------|
| Appearance | | Transparent to very pale yellow |
| Density (23°C) | g/cm ³ | 0,97 |
| Heat Cure Time (T90) at 80°C | Minutes | 15 |
| Heat Cure Time (T90) at 100°C | Minutes | 5 |
| Heat Cure Time (T90) at 125°C | Minutes | 2 |
| Hardness | Shore 00 | 28 |
| CTE | ppm/C° | 330 |
| Thermal conductivity*3 | W/mK | 0.18 |
| Volume resistivity | W·cm | 2x10 ¹⁵ |
| Dielectric strength | kV/mm | 24 |

| | | |
|--|-----|--------|
| Dielectric constant (110Hz) | | 2.63 |
| Dissipation factor (110Hz) | | 0.0003 |
| Impurities (Na ⁺ K ⁺ Cl ⁻) | ppm | <2 |

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

Cure Profile

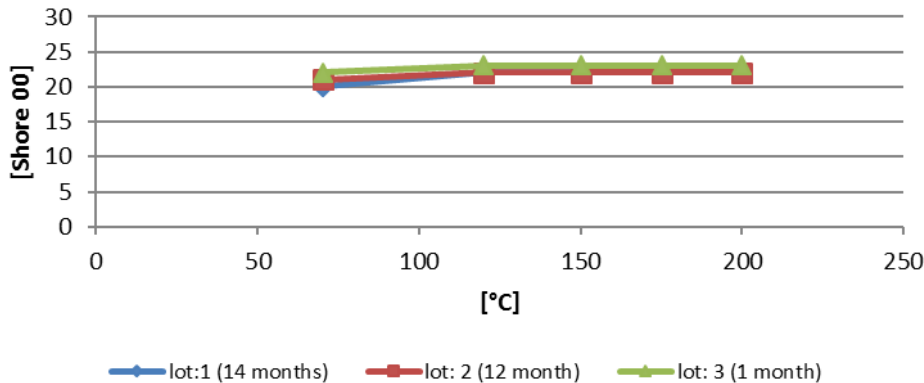
TSE3064 H cures at room temperature and is accelerated upon exposure to heat. Its cure speed is affected by temperature. The cure speed of this material @ various temperatures is provided below.



Note: Test results. Actual results may vary.

TSE3064H (different batches)

(age of components after production before this test)
hardness after 30 min curing at differnt temperature



Note: Test results. Actual results may vary.

Processing Recommendations

Materials such as water, sulphur, nitrogen compounds, organic metallic salts, phosphorus compounds, etc. contained in the surface of the substrate can inhibit curing. A sample patch should always be conducted before proceeding to determine compatibility. All parts should be clean and dry prior to applications.

General Considerations for Use

While the typical operating temperature for silicone materials ranges from -45°C to 200°C, the long-term maintenance of its initial properties is dependent upon design related stress considerations, substrate materials, frequency of thermal cycles, and other factors.

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. Store in a cool, dry place out of direct sunlight. Keep out of the reach of children.

Limitations

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

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