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CREATING TOMORROW'S SOLUTIONS

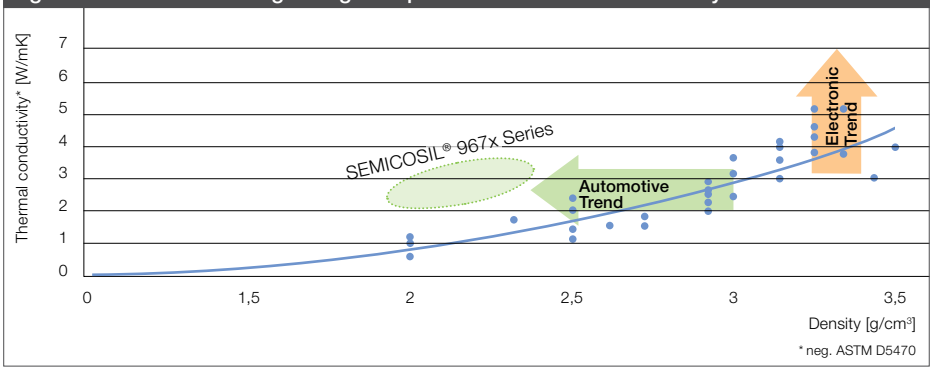
E-MOBILITY I SILICONE TIM MATERIALS I SEMICOSIL® 967x SERIES

# LOW-DENSITY THERMALLY CONDUCTIVE GAP FILLER FOR AUTOMOTIVE xEV APPLICATIONS

**Silicones are the material of choice in automotive applications, not only to protect your sensitive electronics but also when you need to keep temperatures in your xEV battery application reliably under control. The next generation of gap fillers combines the advantages of a cost-effective lightweight gap filler with the maximum possible thermal conductivity, while its high-level dispensing performance is well suited for use in an automotive production environment.**

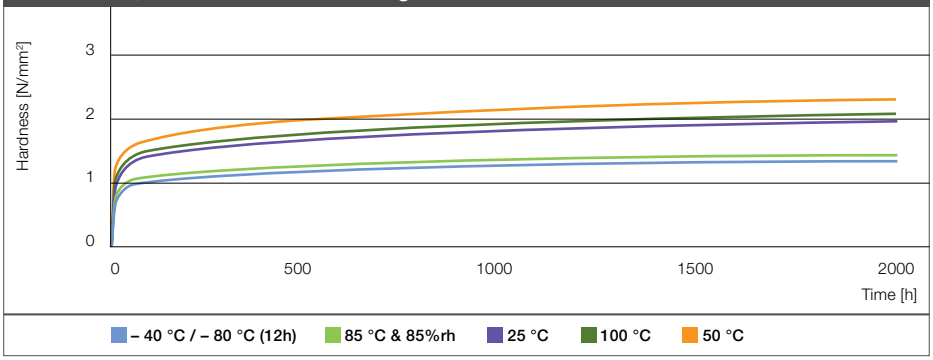
With the general trend toward higher thermal conductivity in automotive electronic applications, there is a corresponding growth in demand for more economical lightweight gap fillers for use in high-volume automotive applications (Fig. 1). The next-generation gap fillers SEMICOSIL® 9671 TC and SEMICOSIL® 9672 TC are targeted at achieving an optimum balance between density, thermal conductivity and processability.

**Fig. 1: Market Trend for Lightweight Gap Filler Materials for EV Battery Packs**




**With the general trend toward more highly thermally conductive materials, battery-pack assemblers are seeking a material with an optimum balance between light weight and good thermal conductivity.**

**Fig. 2: SEMICOSIL® 9671 TC Heat-Aging Test 2000 h: Soft Surface, No Cracks or Oil Bleeding Found**




## Product Description

Two-component addition-curing silicone cures at room temperature, or faster at elevated temperature, to form a soft and tacky gap-filler material with a thermal conductivity of up to 3.2 W/mK.

## Key Benefits of SEMICOSIL® 967x TC Series

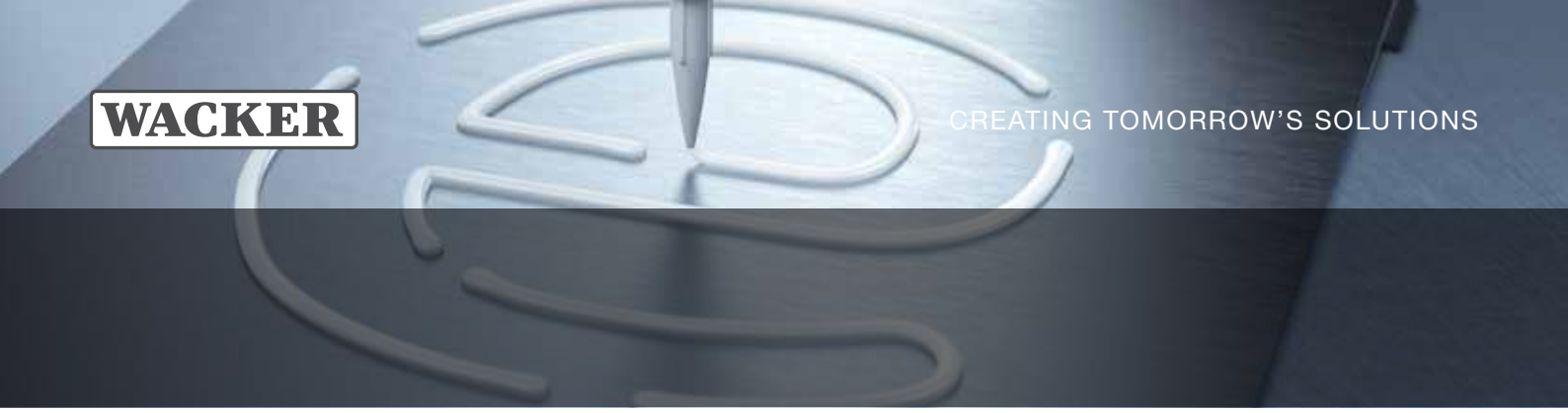
- Best-in-class low-density material
- Thermal conductivity up to 3.2 W/mK
- Accurate dispensing with high extrusion rate of > 40 cc/s for short cycle times
- Excellent aging performance in harsh conditions (Fig. 2)
- Ultra-low volatile content < 100 ppm
- UL 94 V-0 (tested by WACKER)

## Applications

Thermal management material for:

- Electric vehicle (xEVs) battery-pack assembly
- Power electronics such as OBCs and DC/DC converter
- ECUs and sensors

**SEMICOSIL® 9671 TC**



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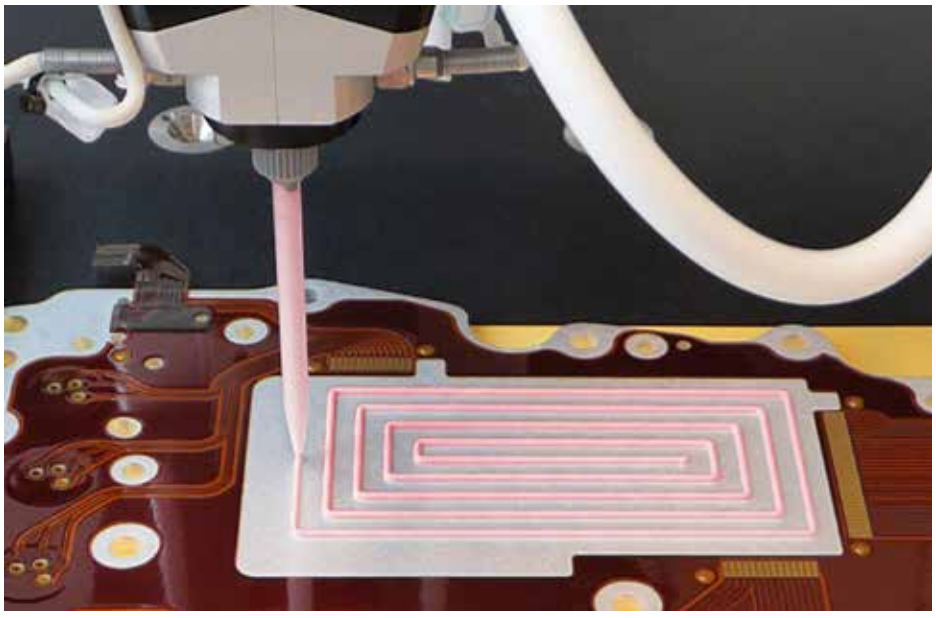
| Product Information | | SEMICOSIL® 9671 TC | SEMICOSIL® 9672 TC |
|---|---|---|---|
| **Product Data Catalysed** | | | |
| Mixing ratio (parts by weight) | A: B | 1:1 | 1:1 |
| Viscosity at 23 °C, directly after mixing | ISO 3219, D=10 1/s | 110,000 mPas s | 120,000 mPas s |
| Viscosity at 23 °C, 1h after mixing | ISO 3219, D=10 1/s | 180,000 mPas s | 170,000 mPas s |
| Processing time | | 60 min | 60 min |
| Curing time 23 °C / 100 °C | | 24 h / 1 h | 24 h / 1 h |
| Maximum particle size | | < 150 micron | < 150 micron |
| Flame rating | Internal test acc. UL94 | V-0 | V-0 |
| Siloxane D4-D8 content | NSCG012 | < 100 ppm | < 100 ppm |
| Platinum-catalyst in component | | A | A |
| **Product Data Cured*** | | | |
| Color (A- /B-side) | | green/white | pink/white |
| Density at 23 °C | | **2.0 g/cm³** | **2.2 g/cm3** |
| Thermal conductivity | ASTM D5470-12 | **2.5 W/mK** | **3.2 W/mK** |
| Hardness Shore | | app. 70 Shore 00 | app. 70 Shore 00 |

*Cured for 60 min at 100 °C
These figures are only intended as guide and should not be used in preparing specifications.



**SEMICOSIL® 9672 TC**

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