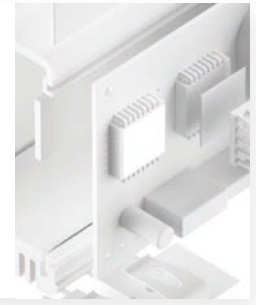


PHASE CHANGE COMPOUND TPC-X-PC-NC-HT-M/-E HALA

printable, dielectric

TPC-X-PC-NC-HT-M/-E is a thixotropic thermally conductive phase changing compound optimising the thermal path e.g. between electronic packages and heat sinks. During warm-up the phase change compound starts filling up surface-specific roughnesses and unevenesses and expels any air enclosures from micro structures even at very low pressure. Both thin bondline and high thermal conductivity minimise the total thermal resistance. It can be pre-applied by screen printing. After drying the compound is dry-to-the-touch and ready for use on the thermal contact area. The compound is designed for applications with extended temperature requirements.



TPC-X-PC-NC-HT-M and TPC-X-PC-NC-HT-E are printable compounds with alternatively long and extended dry times. TPC-X-PC-NC-HT-E dries only at elevated temperature.

PROPERTIES

- Optimal thermal contact by thin bondline
- Silicone-free
- Thermal conductivity: 3.0 W/mK
- Dielectric
- Thixotropic
- Ideal alternative and replacement of messy thermal grease
- Accurate automated application by stencil printing for mass production
- TPC-X-PC-NC-HT-M med dry time: @ RT or elevated temp.
- TPC-X-PC-NC-HT-E extended dry time: only @ elevated temp.

AVAILABILITY

- TPC-X-PC-NC-HT-M and TPC-X-PC-NC-HT-E: Printable type med dry -M and extended dry -E
- E dries at elevated temperature only
- 360 ml SEMCO cartridges (transparent)
- 30 ml syringes

APPLICATION EXAMPLES

Thermal link of:

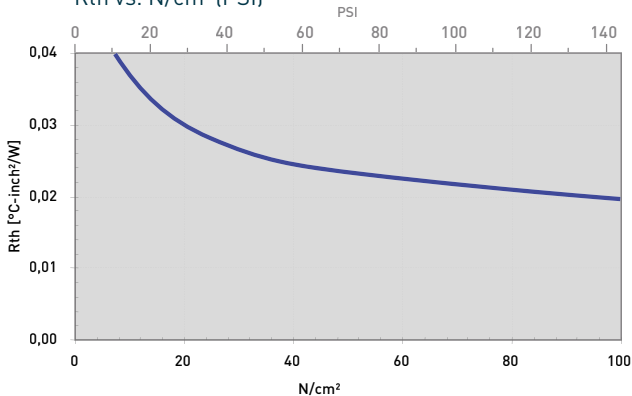
- MOSFETs und IGBTs
- Memory Modules
- IGBT Power Modules
- CPUs

For use in Servo drive control units / Computers / Automation appliances / Microelectronics

| PROPERTY | UNIT | TPC-X-PC-NC-HT-M | TPC-X-PC-NC-HT-E |
|-----------------------------------|-------------------------|---|---|
| MATERIAL | | | |
| | | Dryable Phase Change Compound | Dryable Phase Change Compound |
| Colour | | White | White |
| Assembly | | ~ Print | ~ Print |
| Specific Gravity dried | g/cm ³ | 1.1 @ RT | 1.10 @ RT |
| undried | g/cm ³ | 1.0 @ RT | 1.05 @ RT |
| Viscosity dried @ 10 rpm | Pas | 65 @ 60°C / 38 @ 80°C / 25 @ 100°C / 18 @ 120°C | 65 @ 60°C / 38 @ 80°C / 25 @ 100°C / 18 @ 120°C |
| undried @ 10 rpm | Pas | 70 | 85 |
| Drying @ Temperature | Time | @ 22°C: 24 h (0.05 mm) 48 h (0.15 mm) 56 h (0.25 mm) | @ 60°C: 4 h (0.05 mm) 12 h (0.15 mm) 20 h (0.25mm) |
| @ Thickness | | @ 60°C: 24 min (0.05 mm) 53 min (0.15 mm) 56 min (0.25mm) | @ 125°C: 10 min (0.05 mm) 15 min (0.15 mm) 20 min (0.25 mm) |
| Storage (@ RT) | Months | 9 | 9 |
| RoHS Conformity | 2015/863/EU | Yes | Yes |
| THERMAL | | | |
| Resistance ¹ @ 150 PSI | °C-inch ² /W | 0.02 | 0.02 |
| Resistance ¹ @ 30 PSI | °C-inch ² /W | 0.03 | 0.03 |
| Resistance ¹ @ 10 PSI | °C-inch ² /W | 0.04 | 0.04 |
| Thermal Conductivity | W/mK | 3.0 | 3.0 |
| Phase Change Temperature | °C | ca. 45 | ca. 45 |
| Operating Temperature Range | °C | < 140 | < 140 |
| Max. Storage Temp. | °C | 25 | 25 |

Measurement technique according to: 'ASTM D 5470. All data without warranty and subject to change. Please contact us for further data and information.

Rth vs. N/cm² (PSI)



Release 03 / 2020

Technical Data Sheet

All technical data and information are without warranty and believed to be reliable and accurate, corresponding to the latest state of the art. Since the products are not provided to conform with mutually agreed specifications and their use and processing are unknown we cannot guarantee results, freedom from patent infringement, or their suitability for any application. Product testing by the applicant is recommended. We reserve the right of changes.