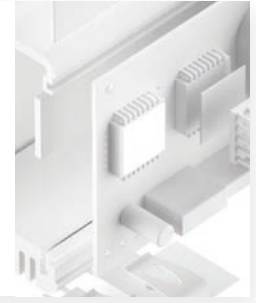


# PHASE CHANGE COMPOUND TPC-X-PC-NC-HT-M/-E HALA

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 unevennesses 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
<b>MATERIAL</b>			
		Dryable Phase Change Compound	Dryable Phase Change Compound
Colour		White	White
Assembly		~ Print	~ Print
Specific Gravity dried	g/cm <sup>3</sup>	1.1 @ RT	1.10 @ RT
undried	g/cm <sup>3</sup>	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
<b>THERMAL</b>			
Resistance <sup>1</sup> @ 150 PSI	°C-inch <sup>2</sup> /W	0.02	0.02
Resistance <sup>1</sup> @ 30 PSI	°C-inch <sup>2</sup> /W	0.03	0.03
Resistance <sup>1</sup> @ 10 PSI	°C-inch <sup>2</sup> /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/cm<sup>2</sup> (PSI)

