FACT SHEET

ICT-PC-FILLUP-STICK

ICT-PC-fillup-Stick is a very cost-efficient, electrically non-isolating and silicone-free, exceptionally well heat-conducting high-performance phase change material as a stick or in tube mould, which ensures a simple, manual, clean and fast application by hand. The FillUp-stick from the ICT-PCM-line up of the pure compounds | Electrically insulating Tim products (pure interface materials) are ideal for small production lots as well as for smaller surfaces and service use.

PHASE CHANGE MATERIALS (ELECTRICALLY CONDUCTIVE)

ICT SUEDWERK GmbH
INSPIRED CUSTOMIZED TIM SOLUTIONS
Bajuwarenring 12a • 82041 Oberhaching
Tel: +49 (0)892123102-0 • Fax: +49 (0)892123102-10
Info@ict-suedwerk.de • www.ict-suedwerk.de

DESCRIPTION

ICT-PCM-LINE UP pure Compounds|electrically non-insulating TIM products (pure interface material)

The **ICT-PC-fillup-stick** is the efficient and straightforward solution when it comes to the manual, fast and clean attaching of interface to the thermal interfaces of the semiconductor and heat sink. The PC-FillUp-Stick is ideal for use on a small surface with moderate surface quality or slight roughness of the contact surfaces, for example, often in extrusion profiles and other heat sinks-which are used for connection to CPUs, IGBTs (in to format), as well as other discrete semiconductors, LEDs, and microprocessors-or any other type of heat generation is the case.

The individual work steps are simple;

– Clean contact surfaces - remove protective cap – move the Phase-Change Compound – Apply slightly opaque –Cap back on it - finished.

In the so-called **fill-up process**, the stick is pulled over the two surfaces with a little pressure. The unevenness and roughness on the surface then provide sufficient abrasion. The film thus applied ensures a simple and clean connection of the two surfaces to be contacted.

The ICT FillUp sticks are ideal for small production lots as well as for smaller surfaces and service use.

The materials leave the fixed aggregate state when the phase change temperatures are exceeded from approx. 51°C (ICT-F-ST-IP-bar-graphite fiber) up to 60° (ICT-F-ST-AP-Bar-stan) and become soft. Due to the volumetric expansion above the phase change temperature by approx. 15% to 20%, air pockets are efficiently expelled to the outside. Due to the full-surface wetting, the thermal connection is far superior to the conventional variants and the resulting thermal resistance is significantly lower.

The product group comprises a total of two delivery variants:

Item Name	ICT Article Nr.	Weight	Container
ICT-PC-Fill-up-Stick-Bar-19	ICT-F-ST-Ap-BAR-19	19 Grams	Stick-Bar
ICT-PC-Fill-up-PEN-05	ICT-F-ST-Ap-PEN-05	5 Grams	PEN
ICT-PC-Fill-up-Stick-Bar-Graph-19	ICT-F-ST-Ip-BAR-19	19 Grams	Stick-Bar
ICT-PC-Fill-up-PEN-Graph-05	ICT-F-ST-Ip-BAR-05	5 Grams	PEN

The product group comprises two different variants of total heat control wax:

1. As a standard PC variant or
2. with graphite particles, the variant **-graph-**

The version enriched with graphite fibres is electrically conductive and also reduces the thermal resistance. ICT FillUp sticks (heat control pins) are ideal for small production lots as well as for smaller surfaces and service use.

Residues such as for example in repair work can be easily removed with isopropyl alcohol. Thus the user benefited in his production of a very high process reliability, which is hardly achievable with conventional methods.

Using this straightforward thermal interface solution, for example, CPU, IGBTs (in to format), as well as other discrete semiconductors, LEDs, and microprocessors or any other kind of heat generation can be quickly connected to the interface.

Attention: Please note during the installation that the surfaces are very flat and not convex/concave. Contamination with dust and/or other particles as well as punching burrs at the edges of the contact surfaces must be avoided and removed.

TYPICAL PROPERTIES

Operating temperature	**from -60 to 140 °C**
Thermally conductive	**No**
Thermal conductivity	**0 W/m*K**
Thermal resistance (inch² / 645,16mm²)	**0.01 0.01 0.02 0.02**
Electrically conductive	**Yes**
Color	**White Graphite**
Material	**PCM Interface compound Aufbau**

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FEATURES

Some properties:

- Minimisation of thermal contact resistance by volumetric expansion by approx. 15-20% and active wetting of the contact surfaces.
- Solid silicone-free thermal conductive substance – dry when touched
- No curing and bleeding
- Fast and practical application by block-like fill-up stick and dispenser-like pen
- Very productive
- Interchangeability of the material without surface treatment
- Cleaning by Isopropyl alcohol
- Fast, clean and process-safe pre-assembly

The ICT PC-fill-up stick simple handling - remove protective cap - apply PCM - done; a really cool solution avialable as Stick-Pen or Bar

DELIVERY FORMS / APPLICATIONS

The ICT PC-fill-up stick with simple handling; a really cool solution available as stick-Bar & Pen

Item name	ICT Article Nr.	Weight	
ICT-PC-Fill-up-Stick-Bar-19	ICT-F-ST-Ap-BAR-19	19 Grams	
ICT-PC-Fill-up-PEN-05	ICT-F-ST-Ap-PEN-05	5 Grams	
ICT-PC-Fill-up-Stick-Bar-Graph-19	ICT-F-ST-Ip-BAR-19	19 Grams	
ICT-PC-Fill-up-PEN-Graph-05	ICT-F-ST-Ip-BAR-05	5 Grams	

Please note that for larger areas, for example in the assembly of power modules, the use of a heat-conducting wax foil advantage is oats. Th precisely stamped on the size and delivered in a production-packed manner. The layer thickness of the heat control wax on these films is alv constant due to the applied production process.

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