Technical Data Sheet

LOCTITE TCP 4000 PM

Known as PSX-Pm
December 2014

PRODUCT DESCRIPTION

LOCTITE TCP 4000 PM provides the following product characteristics:

Technology	Phase Change Thermal Interface
Appearance	gray
Phase change temperature	45 °C
Application Method	Stencil, Screen print or Manually apply
Typical Assembly Applications	• Microprocessors • GPUs • Multichip modules • ASICs • IGBT • FBDIMM/Memory • Lidded processor applications • Active heat sinks in electronic applications
Application	Thermal management

LOCTITE TCP 4000 PM Medium Dry is a reworkable and repeatable phase change material suitable for use between heat generating devices and the surfaces to which they are mounted or other heat dissipating surfaces. This material offers enhanced performance and reliability with the application ease of thermal grease.

LOCTITE TCP 4000 PM is supplied in cartridges. Other packaging formats are available upon request.

TYPICAL PROPERTIES

Shelf Life @ 8 to 28°C, year	1
Printed Material:	
Casson Base Viscosity @ 25 °C, mPa·s (cP):	
Haake 550, PK1, 1° :	
@ 1 rpm	170,000
@ 10 rpm	70,000
Specific Gravity	1.8
Solid Material:	
Specific Gravity	2.0
Thermal Conductivity , W/(m-K)	3.4

TYPICAL DRYING PERFORMANCE

Recommended Drying Conditions

@ 0.051 mm Thickness:
30 hours @ 22°C or
22 minutes @ 60°C or
3 minutes @ 125°C

@ 0.152 mm Thickness:
50 hours @ 22°C or
50 minutes @ 60°C or
4.5 minutes @ 125°C

@ 0.254 mm Thickness:
65 hours @ 22°C or
65 minutes @ 60°C or
8 minutes @ 125°C

The above drying profile is a guideline recommendation. Conditions (time and temperature) may vary based on customers' experience and their application requirements, as well as customer drying equipment, oven loading and actual oven temperatures.

GENERAL INFORMATION

For safe handling information on this product, consult the Safety Data Sheet, (SDS).

DIRECTIONS FOR USE

1. Once the compound is applied, it will dry to a solid phase change material. Drying is required for optimal thermal performance.
2. The material flows at the phase change temperature and conforms to the surface features of the heat sink and component.
3. Upon flow, air is expelled from the interface, reducing thermal impedance and the material performs as a highly efficient thermal transfer material.

Application:

Jars / Screens

1. Keep jars closed tightly when not in use. Open jars will evaporate solvent affecting the performance of the material.
2. Place a small amount of material onto the screen. With the substrate under the screen, draw the material down, applying the material onto the substrate.
3. Recommended maximum thickness is 10 mils (254 microns) to ensure complete drying under normal conditions.

Syringe Dispense

1. Use a hand syringe or time pressure dispenser. Dispense the required amount of material onto the substrate.
2. Ideal performance is achieved by having a thin layer of material. Therefore the LOCTITE TCP 4000 PM material should be drawn down or smoothed out to provide a thin layer.
3. Recommended maximum thickness is 10 mils (254 microns) to ensure complete drying under normal conditions.

STORAGE:
Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling.

Optimal Storage : 8 to 28 °C

Material removed from containers may be contaminated during use. Do not return product to the original container. Henkel Corporation cannot assume responsibility for product which has been contaminated or stored under conditions other than those previously indicated. If additional information is required, please contact your local Technical Service Center or Customer Service Representative.

Not for product specifications
The technical data contained herein are intended as reference only. Please contact your local quality department for assistance and recommendations on specifications for this product.

Conversions
(°C x 1.8) + 32 = °F
kV/mm x 25.4 = V/mil
mm / 25.4 = inches
N x 0.225 = lb
N/mm x 5.71 = lb/in
psi x 145 = N/mm²
MPa = N/mm²
N·m x 8.851 = lb·in
N·m x 0.738 = lb·ft
N·mm x 0.142 = oz·in
mPa·s = cP

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Note:
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