

THERMAL COMPOUND PASTE (TCP)

Product Description

THERMAL COMPOUND Paste also known as Thermal Grease, CPU grease, thermal compound, thermal gel, thermal interface material or thermal paste is a kind of thermally conductive but usually electrically insulating compound, which is commonly used as an interface between heat sinks and heat sources (e.g., high power semiconductor devices). The main role of thermal grease is to eliminate air gaps or spaces (which act as thermal insulator) from the interface area so as to maximize heat transfer. Heat sink paste protects delicate electronic parts against overheating. They are ideal for use as a thermal interface and insulator for semiconductor elements (transistors, thermistors) and various types of heat sinks.

Applications

THERMAL COMPOUND PASTE is recommended for protection of sensitive components such as,

- Electronic components such as IC CPU and MOS.
- DDR module and DVD applications.
- LCD TV, Telecommunication equipment, Laptop and Wireless receiver.
- DDR module and DVD applications.
- LED, M/B, P/S radiator, computer.

Benefits

- Excellent chemical stability and weatherability.
- Excellent electrical properties.
- Non-Corrosive in nature.
- Good performance against heat and cold resistance.
- Suitable for temperature range up to -50~200°C
- High thermal conductivity and excellent flame retardant.

Performance Standard

- Comply to the rules of RoHS, REACH and UL(E488095).

Typical Properties

PROPERTIES	1 TC	2 TC	3 TC	4 TC	5 TC
Color	White	Dark Grey	Light Grey	Silver	Gold
Thermal Resistance, °C in ² /W 0.1mm 80psi	0.25	0.25	0.25	0.25	0.25
Specific Gravity (g/cm ³)	2.2	2.2	2.2	2.2	2.2
Temperature range (°C)	-50~200	-50~200	-50~200	-50~200	-50~200
Cone Penetration (mm)	180~210	180~210	180~210	180~210	180~210
Volatile Matter (%)	≤0.2	≤0.2	≤0.2	≤0.2	≤0.2
Thermal Conductivity W/(M·K)	≥1.0	≥2.0	≥3.0	≥4.0	≥5.0
Oil Bleed (150°C×24h, %)	≤1.0	≤1.0	≤1.0	≤1.0	≤1.0
Permittivity(F/m)	3.2	3.2	3.2	3.2	3.2
Volume resistivity(Ω•CM)	3.0×10 ¹⁵	3.0×10 ¹⁵	3.0×10 ¹⁵	3.0×10 ¹⁵	3.0×10 ¹⁵
Dielectric strength (KV/mm)	22	22	22	22	22
Dielectric loss factor(1MHz)	0.01	0.01	0.01	0.01	0.01

- Available Packs: 1, 5, 18 and 180 Kg.
- Tube Pack: 50, 100 and 200 grams
- 7 Grams Syringe

Shelf Life – Up to 12 Months from the Manufacturing date.

STORAGE

This product is non-dangerous and non-toxic. Keep it away from rain and sunshine. Store in a cool and dry place.

* All related specifications are meets or exceeds.

Due to continual product research and development, the information contained herein is subject to change without notification. Typical Properties may vary slightly. The Material Safety Data Sheet (MSDS) are available upon request through our sales office.

1. PRODUCT AND COMPANY IDENTIFICATION

Product THERMAL COMPOUND PASTE

Supplier PETRELPLUS INC.

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2. COMPOSITION

Silicone base oil with proprietary additives.

3. HAZARDS IDENTIFICATION

FIRE -Flammable at high temperature.

HEALTH

Eye contact -May cause mild irritation to the eyes upon direct contact.

Skin contact -Prolonged contact may defat the skin or can cause dermatitis.

Inhalation -hazards.

Ingestion -Harmful if swallowed.

4. FIRST-AID MEASURES

Inhalation -Remove person to fresh air. Seek medical help if discomfort persists.

Ingestion -Do not induce vomiting. Seek medical support.

Skin Contact -Immediately flush skin with plenty of water for at least 15 minutes.

Eye Contact -Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally.

5. FIRE-FIGHTING METHODS

Extinguishing media -Use dry chemical powder or carbon di – oxide or foam.

Special protective equipment -Positive pressure self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURE

Personal protection - Adequate ventilation, gloves, goggles, overalls and boots.

Environmental precautions - Avoid entry into water courses.

Clean up method - Absorb on inert material.

7. STORAGE AND HANDLING

Handling - Impervious gloves & eye protection ensure good ventilation. Keep away from source of ignition.

Storage - Store in a cool & dry place.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Respiratory protection - Not required under normal conditions.

Skin/hand protection - Impervious gloves, overalls, and boots.

Eye protection - Use Goggles

9. TYPICAL PROPERTIES

NLGI grade - 1, 2 and 3

Colour - white

Drop Point - Nil

10. STABILITY AND REACTIVITY

Stability - Stable

Conditions to avoid - Excessive temperatures

Materials to avoid - Strong oxidizers

Hazardous decomposition products - Oxides of carbon and nitrogen

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11. TOXICOLOGICAL INFORMATION

Skin contact	- Possible irritation
Eye contact	- Possible irritation
Inhalation	- Not applicable
Ingestion	- Irritation. May cause lung damage.
Long term effect	- Not known

12. ECOLOGICAL INFORMATION

Mobility	- Mobile
Degradation	- Low
Accumulation	-Not expected
Short- & Long-Term effect	- Water pollutant

13. DISPOSAL CONSIDERATIONS

Dispose off according to local and national regulations.

14. TRANSPORT INFOMRATION

CPL	- Not applicable
IMO	-Not applicable

15. REGULATORY INFORMATION

Symbol(s)	-Not applicable
Phrase(s)	- Not applicable
Phrase(s)	- Not applicable

16. OTHER INFORMATION: PRODUCT SAFETY

For safety reasons, it is IMPERATIVE that customer: -Ensure that all those within their control who use the products are supplied with all relevant information contained within the Material Safety Data Sheet and Technical Bulletin concerning the applications for which the product is designed and any instructions or warning.