

Silver Content Thermal Compound

The silver content thermal compound blended with excellent heat-conductive silver fillers. The low bleed properties of this improved compound assure lasting for heat transfer coupling.

This is an effective thermal coupler for any heat sink device where efficient cooling is required, such as CPU power transistor, and SCRs to heat sink or chassis. This grease-like compound will not dry out, harden, or melt even after long term exposure to temperatures up to 150°C.

It contains no lead or other harmful heavy metal salts and will not irritate skin.

Features

- Grease –like consistency
- Silver color
- Low bleed
- Very stable at elevated temperatures
- Excellent thermal resistance and high thermal conductivity
- Efficient thermal coupler
- Effective and positive heat sink sealers and heat transfer agent

Typical Properties

| | |
|--|-----------|
| Color..... | Silver |
| Silver Content, % | 30 |
| Penetration..... | 350 ~ 400 |
| Bleed, percent after 25 hrs at 150°C | 0.1 ~ 0.2 |
| Evaporation, percent after 24 hrs at 150°C | 0.1 ~ 0.5 |
| Thermal Conductivity W/m • K..... | 6.5 |

1. IDENTIFICATION OF THE SUBSTANCE

| | | |
|---|-------------------------|------|
| Generic Description : Silicone compound | <u>Compound Name</u> | Wt % |
| Physical Form : Paste | Polydimethethylsiloxane | >60 |
| Color : Silver | Silver Powder | ≥30 |
| Odor : Odorless | Metal Oxide | >5 |

2. OSHA HAZARDOUS COMPONENTS

None present. This is not a hazardous material.

3. EFFECTS OF OVEREXPOSURE

Acute Effects

Eye : Direct contact may cause temporary redness and discomfort.
Skin : No significant irritation expected from a single short-term exposure.
Inhalation : No significant effects expected from a single short-term exposure.
Oral : Low ingestion hazard in normal use.

Prolonged / Repeated Exposure Effects

Skin : No known applicable information.
Inhalation : No known applicable information.
Oral : No known applicable information.

Signs and Symptoms of Overexposure

No known applicable information.

Medical Conditions Aggravated by Exposure

No known applicable information.

4. FIRST AID MEASURES

Eye : Immediately flush with water.
Skin : No first aid should be needed.
Inhalation : No first aid should be needed.
Oral : No first aid should be needed.
Comment : Treat symptomatically.

5. FIRE FIGHTING MEASURES

| | |
|-----------------------------|---|
| Flash Point• • | Not applicable – Solid |
| Autoignition Temperature• • | Not determined |
| Flammability Limits Air• • | Not determined. |
| Extinguishing Media• • | On large fires use dry chemical, foam or water spray. On small fires use carbon dioxide (CO ₂), dry chemical or water spray. Water can be used to cool fire exposed container. |
| Fire Fighting Measures• • | Self-contained breathing apparatus and protective clothing should be worn in fighting large fires involving chemicals. Determine the need to evacuate or isolate the area according to your local emergency plan. Use water spray to keep fire exposed containers cool. |
| Unusual Fire Hazards• • | None. |

Hazardous Decomposition Products

Thermal breakdown of this product during fire or very high heat conditions may evolve the following hazardous decomposition products: Silicon dioxide. Carbon oxides and traces of incompletely burned carbon compounds. Formaldehyde.

6. ACCIDENTAL RELEASE MEASURES

Containment/ Observe all personal protection equipment recommendations described in Sections 5 and 8.

Clean up Wipe up or scrape up and contain for salvage or disposal. Clean area as appropriate since some silicone materials, even in small quantities, may present a slip hazard. Final cleaning may require use of steam, solvents or detergents. Dispose of saturated absorbent or cleaning materials appropriately, since spontaneous heating may occur. You will need to determine which local laws and regulations are applicable. Sections 13 and 15 of this MSDS provide information regarding certain local laws requirements.

7. HANDLING AND STORAGE

Use with adequate ventilation. Avoid eye contact.

Use reasonable care and store away from oxidizing materials.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

There are no components with workplace exposure limits.

Engineering Controls

Local Ventilation • • None should be needed.

General Ventilation • • Recommended.

Personal Protective Equipment for Routine Handling

Eyes • • Use proper protection – safety glasses as a minimum.

Skin • • Washing at mealtime and end of shift is adequate.

Suitable Gloves • • No special protection needed.

Inhalation • • No respiratory protection should be needed.

Suitable Respirator • • None should be needed.

Personal Protective Equipment for Spills

Eyes • • Use proper protection – safety glasses as a minimum.

Skin • • Washing at mealtime and end of shift is adequate.

Inhalation / Suitable Respirator • • No respiratory protection should be needed.

Precautionary Measures • • Avoid eye contact. Use reasonable care.

Note: These precautions are for room temperature handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Form • • Paste

Color • • Silver

Odor • • Odorless

Specific Gravity @25°C • • 1.40

Viscosity • • Not determined.

Freezing / Melting Point • • Not determined.

Boiling Point • • Not determined.

Vapor Pressure @25°C • • Not determined.

Vapor Density • • Not determined.

Solubility in Water • • 0.00 G/L

PH • • Not determined.

Volatile Content • • 0.00%

Note: The above information is not intended for use in preparing product specifications.

10. STABILITY AND REACTIVITY

Chemical Stability • • Stable.

Hazardous Polymerization • • Hazardous polymerization will not occur.

Conditions to Avoid • • None.

Materials to Avoid • • Oxidizing material can cause a reaction.

11. TOXICOLOGICAL INFORMATION

Acute Toxicology Data for Product

Complete information is not yet available.

Component Toxicology Information

Complete information is not yet available.

Special Hazard Information on Components

No known applicable information.

12. ECOLOGICAL INFORMATION

Environmental Fate and Distribution

No specific information is available.

Environmental Effects

No specific information is available.

Fate and Effects in Waste Water Treatment Plants

No specific information is available.

13. DISPOSAL CONSIDERATIONS

When a decision is made to discard this material, as received, is it classified as a hazardous waste? No

14. TRANSPORT INFORMATION

DOT Road Shipment Information

Not subject to DOT.

Ocean Shipment

Not subject to IMDG code.

Air Shipment

Not subject to ICAO regulations.

15. OTHER INFORMATION

These data are offered in good faith as typical values and not as product specifications. No warranty, either expressed or implied, is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable.

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