Manufactured by

Package For/Supply By

127 Series Thermal Compound

Thermal Interface Material - 127-12 & 127-20

MATERIAL SAFETY DATA SHEET

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1. Identification

Product identifier: Thermal Interface Material, S1202K2319, 127-12, 127-20
Other means of identification: None.
Recommended use: Industrial use.
Recommended restrictions: None known.

Manufacturer/Importer/Supplier/Distributor information

Company Name: SigmaOx
Address: 1911 NC HWY 902 W Pittsboro, NC 27312
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Emergency telephone number

Within USA and Canada: 9197048599

2. Hazard(s) identification

Physical hazards Not classified.
Health hazards Not classified.
OSHA defined hazards Not classified.

Label elements

Hazard symbol None.
Signal word None.
Hazard statement None.

Precautionary statement

Prevention Observes good industrial hygiene practices.
Response: Wash hands after handling.
Storage Store away from incompatible materials.
Disposal Dispose of waste and residues in accordance with local authority requirements.
Hazard(s) not otherwise classified (HNOC) None known.
Supplemental information None.

3. Composition/information on ingredients Mixtures

Chemical name CAS number %
Residual oils (petroleum), 64742-62-7 3-5 solvent-dewaxed

4. First-aid measures

Inhalation Not relevant, due to the form of the product.
Skin contact Not relevant, due to the form of the product.
Eye contact Not relevant, due to the form of the product.
Ingestion Not relevant, due to the form of the product.
Most important: Not relevant, due to the form of the product.
symptoms/effects, acute and delayed Indication of immediate Treat symptomatically. medical attention and special treatment needed General information First aid personnel must be aware of their own risk during rescue.

5. Fire-fighting measures

Suitable extinguishing media Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing None.

Specific hazards arising from During fire, gasses hazardous to health may be formed.

Special protective equipment and precautions for firefighters

Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting Use standard firefighting procedures and consider the hazards of other involved materials. equipment/instructions Specific methods Use standard firefighting procedures and consider the hazards of other involved materials. General fire hazards Will burn if involved in a fire.

6. Accidental release measures

Personal precautions, Keep unnecessary personnel away. For personal protection, see section 8 of the SDS. protective equipment and emergency procedures Methods and materials for containment and cleaning up Sweep up or gather material and place in the appropriate Environmental precautions Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

No special precautions are necessary beyond normal good hygiene practices. See Section 8 of the SDS for additional personal protection advice when handling this product. Observe good industrial hygiene practices.

Conditions for safe storage, Store in closed original container in a dry place. including any incompatibilities

8. Exposure controls/personal protection

Occupational exposure limits the US. ACGIH Threshold Limit Values Components Type Value Form Residual oils (petroleum), TWA 5 mg/m3 Inhalable fraction. solvent-dewaxed (CAS 64742-62-7)
Biological limit values No biological exposure limits noted for the ingredient(s).
Appropriate engineering controls
Used as intended, this product is not expected to generate potentially hazardous quantities of dust or fumes.
In an industrial work environment no special precautions or control measures are required.
Individual protection measures, such as personal protective equipment Eye/face protection Not normally needed.
Skin protection Hand protection Not normally needed.

Other

No skin protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid skin contact.

Respiratory protection Not normally needed.

Thermal hazards Wear appropriate thermal protective clothing, when necessary. General hygiene considerations. Wash hands after contact.

9. Physical and chemical properties

Appearance

Physical state liquid.
Color White-Gray.
Odor None.
Odor threshold Not applicable.
pH Not applicable.
Melting point/freezing point Not applicable.
Initial boiling point and boiling range Not applicable.
Flash point Not applicable.
Evaporation rate Not applicable.
Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not applicable.
Flammability limit - upper (%) Not applicable.
Explosive limit - lower (%) Not applicable.
Explosive limit - upper (%) Not applicable.
Vapor pressure Not applicable.
Vapor density Not applicable.

Relative density 2.54 (77 °F (25 °C)) Solubility(ies)
Solubility (water) Insoluble in water.
Partition coefficient (n-octanol/water) Not applicable.

Auto-ignition temperature Not applicable.
Decomposition temperature Not applicable.
Viscosity Not applicable.

Other information

Bulk density 2.54 g/cm³
Explosive properties Not explosive.
Oxidizing properties Not oxidizing.

10. Stability and reactivity

Reactivity

The product is stable and non-reactive under normal conditions of use, storage and transport. Chemical stability Material is stable under normal conditions. Possibility of hazardous No dangerous reaction known under conditions of normal use.

Conditions to avoid

Avoid temperatures exceeding the decomposition temperature. Contact with incompatible materials.

Incompatible materials Strong oxidizing agents.
Hazardous decomposition No hazardous decomposition products are known. products

11. Toxicological information

Information on likely routes of exposure

Inhalation Not likely, due to the form of the product.
Skin contact No adverse effects due to skin contact.
Eye contact No adverse effects due to eye contact are expected.
Ingestion No harmful effects expected in amounts likely to be ingested by accident.

Symptoms related to the physical, chemical and toxicological characteristics: Not relevant, due to the form of the product.

Information on toxicological effects

Acute toxicity No adverse effects are expected.
Skin corrosion/irritation Not classified.
Serious eye damage/eye Not classified.

Irritation

Respiratory or skin sensitization Not classified.
Respiratory sensitization Not classified.
Skin sensitization Not classified.
Germ cell mutagenicity Not classified.
Overall Evaluation of Carcinogenicity Not listed.
NTP Report on Carcinogens Not listed.
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) Not regulated.
Reproductive toxicity Not classified.
Specific target organ toxicity - single exposure Not classified.
Specific target organ toxicity - repeated exposure Not classified.
Aspiration hazard Not relevant, due to the form of the product.
Chronic effects No known chronic or acute health risks.
Further information: None known.

12. Ecological information

Ecotoxicity

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Persistence and degradability No data available.
Bioaccumulative potential No data available.
Mobility in soil The product is insoluble in water and will sediment in water systems. Other adverse effects An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal sites. Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code

The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

14. Transport information DOT

Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Since emptied containers may retain product residue, follow label warnings even after the container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

Not regulated as dangerous goods. IATA
Not regulated as dangerous goods. IMDG
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code.

15. Regulatory information

US federal regulations

This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D) Not regulated.
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) Not regulated.
CERCLA Hazardous Substance List (40 CFR 302.4)
Zinc oxide (CAS 1314-13-2) LISTED Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - No Delayed Hazard - No Fire Hazard
Pressure Hazard - No Reactivity Hazard - No
SARA 302 Extremely hazardous substance Not listed.
SARA 311/312 Hazardous No chemical
SARA 313 (TRI reporting)

Chemical name % by wt. CAS number

Aluminum 40 - 80	7429-90-5
Zinc oxide 1 - 15	1314-13-2
Silicon Nitride 1 - 4	12033-89-5

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List -Not regulated.
Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130) Not regulated.
Safe Drinking Water Act (SDWA) Not regulated.

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

16. Other information

HMIS® ratings NFPA ratings

Last Revision date: Jul 28, 2023 - Revision number 1.1

Health: 0
Flammability: 0
Physical hazard: 0

SigmaOx cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.