



MATERIAL SAFETY DATA SHEET

Item No. : 301
Item Name : Heat Transfer Compound
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Chemical Classification : Silicone compound
Dangerous Good Classification : Not applicable

1. Composition / Information on Ingredients

Chemical Characterization : Mixture
Physical Form : Paste
Color : White
Use : Lubricant

Hazardous Identification*

<u>Ingredients</u>	<u>% by Wt</u>	<u>CAS No.</u>
Poly (dimethylsiloxane)	< 1%	63148 - 62 - 9
Zinc Oxide	> 65%	1314 - 13 - 2
Silica amorphous	> 30%	7631 - 86 - 9

2. Hazards Identification

Overall Hazard Classification : Not hazardous
Hazard Information :

- ◆ Not hazardous
- ◆ Avoid contact with skin eyes.
- ◆ Use appropriate container to avoid environmental contamination.
- ◆ This material and its container must be disposed of as hazardous waste.

Route of Exposure : Skin Contact and Accidental Ingestion.

Possible Health Effects :

Acute

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



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Chronic

- Skin : No known applicable information.
Inhalation : No known applicable information.
Ingestion : Repeated ingestion or swallowing large amounts may injure internally.

Signs and Symptoms of Overexposure :

No signification adverse effects from a single exposure expected from normal use.

3. First Aid Measures

- Eyes : Immediately flush with water
Skin : No first aid should be needed
Inhalation : No first aid should be needed
Ingestion : Get medical attention.
Comments : Treat symptomatically
Note to physicians : Treat symptomatically. For further information, the medical practitioner should contact us

4. Fire Fighting Measures

- Flammability : Combustible
Flash Point : > 600°F (Closed Cup)
Autoignition temperature : Not determined
Lower Flammability Limit : Not determined
Upper Flammability Limit : Not determined
Hazardous Properties : None
Extinguishing Media : On large fires use dry chemical, foam or water spray. On small fires use carbon dioxide (CO₂), dry chemical or water spray. Water can be used to cool fire-exposed containers.
Special Fire Fighting Procedures and Equipment : Self-contained breathing apparatus 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.
Hazardous Combustion Products : Carbon oxides and traces of incompletely burned carbon compounds.
Silicon dioxide, Metal oxides. Formaldehyde.
Unsuitable Extinguishing Media : None established



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5. Accidental Release Measures

- Personal Precautions : Avoid eye contact. Do not take internally
- Environmental Precautions : Prevent from spreading or entering into drains, ditches or rivers by using sand, earth or other appropriate barriers
- Methods for Cleaning up : Observe all personal protective equipment recommendations described in this MSDS. If diked material can be pumped, store recovered material in appropriate container. 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. Law and regulations may apply to releases and disposal of this material, as well as those material and items employed in the clean up of releases. You will need to determine which laws and regulations are applicable.

6. Handling and Storage

- Handling precautions : Use with adequate ventilation. Avoid eye contact. Do not take internally. Exercise good industrial hygiene practice. Wash after handling, especially before eating, drinking or smoking.
- Storage Conditions Unsuitable : Use reasonable care and store away from oxidizing materials. None established.
- Packaging Materials

7. Exposure Controls / Personal Protection

Industrial Hygiene Standards :

<u>Ingredients</u>	<u>CAS No.</u>	<u>Exposure Limits</u>
None known		

Engineering Controls

- Local Ventilation : None should be needed
- General Ventilation : Recommended

Personal Protective Equipment for Routine Handling

- Respiratory Protection : No respiratory protection should be needed.
- Suitable Respirator : None should be needed.
- Eye Protection : Use proper protection-safety glasses as a minimum.
- Hand Protection : No special protection needed.
- Skin Protection : Washing at mealtime and end of shift is adequate.

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** All the information is provided on the basic in good faith, and is believed to be trustworthy but is for reference only. Adhesion is very complicated and the result of it is much dependent on the surface material, additives, releasing agents of the substrates and user's methods. UEA and its agents, dealers, distributors, directors and employees cannot accept any liability for the results whatsoever arising from the use of UEA's products due that the utilization of these products is simply out of UEA's control. The users are responsible for selecting the suitability of the products and methods of use.



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Hygiene Measures : Exercise good industrial hygiene practice. Wash after handling, especially before eating, drinking or smoking.

Personal Protective Equipment for Spills

Respiratory protection : No respiratory protection should be needed.
Eye protection : Use proper protection-safety glasses as a minimum.
Skin protection : Washing a mealtime and end of shift is adequate.
Precautionary Measures : Avoid eye contact. Do not take internally. Use reasonable care.

*Note: These precautions are for room temperature handling. Use at elevated temperature or aerosol/ spray applications may require added precautions.

8. Physical and Chemical Properties

Physical Form : Paste
Color : White
Odor : Odorless
Ph : Not determined
Solubility in Water : 0 g/l
Boiling Point : Not determined
Melting Point : Not determined
Flash Point : > 600°F (Closed Cup)
Autoignition Temperature : Not determined
Explosive Properties : No
Oxidizing Properties : No
Vapor Pressure@25°C : Not determined
Specific Gravity : 2.18 ± 0.02
Octanol / water partition coefficient : Not determined
Vapour Density (air =1) : Not determined
Viscosity : Not determined
Molecular Weight : Not determined

*The above information is not intended for use in preparing product specifications. Contact Us.

9. Stability and Reactivity

Stability : Stable

Reactivity

Conditions to Avoid : None
Materials to Avoid : Oxidizing material can cause a reaction.
Hazardous Decomposition Products : Carbon oxides traces of incompletely burned carbon compounds.



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Silicon dioxide, Metal oxides, Formaldehyde.

Hazardous Polymerization : Hazardous Polymerization will not occur.

10. Toxicological Information

Possible Health Effects : Refer to Section "Possible Health Effects"
 Sensitizing Effects : None known.
 Mutagenic Effects : None known.
 Reproductive Effects : None known.
 Carcinogenic Effects : None known.
 Other Health Hazard Information : No known applicable information.

*The above listed potential effects of overexposure are based on actual data, the results of studies performed upon similar composition, composition data, and / or expert review of the products.

11. Ecological Information

Environmental Fate and Distribution : Solid material, insoluble in water.

Environmental Effects :

Very toxic to aquatic organisms and may cause long-term adverse effects in the aquatic environment. However, due to the physical form and water-insolubility of the product the bioavailability is negligible.

Fate and Effects in waste Water Treatment Plants : No adverse effects on bacteria are predicted.

12. Disposal Considerations

Products Disposal : This material must be disposed of as hazardous waste.
 Packaging Disposal : Dispose of in accordance with local regulations.

13. Transport Information

Road and Rail Transport : Not applicable
 Sea Transport (IMDG) : Not subject to IMDG code
 Air Transport (IATA) : Not subject to IATA regulations

14. Regulatory Information

Applicable Laws : Provisions of the Regulations for the Safe Handling of Chemicals in the Workplace, particularly those relating to the safe use, production, storage and transportation of dangerous chemicals.

Chemical Inventories : MITI : All components are listed on ENCS or its exempt rule.

PICCS : All ingredients listed or exempt.

TSCA : All chemical substances in this material are included on or exempted from listing on the TSCA

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Inventory of Chemical Substances.

KECL	:	All ingredients listed, exempt to notified.
AICS	:	All ingredient listed or exempt.
DSL	:	All chemical substances in this material are included on or exempted from the DSL.
EINECS	:	All ingredient listed or exempt.
IECSC	:	All ingredient listed or exempt.

15. Other Information

This information is offered in good faith as typical values and not as a products specification. No warranty, expressed or implied, is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate.