

**SAFETY DATA SHEET**

Complies with OSHA Hazard Communication Standard 29 CFR 1910.1200

**Product Name: HEAT SINK COMPOUND****SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**

Product Type:	Silicone	Emergency Contact:	<b>Chemtrec</b>
Product Name:	<b>HEAT SINK COMPOUND</b>	Phone:	<b>(800) 424-9300</b>
Part Number(s):	<b>10-8106, 10-8108, 10-8109</b>		

**SECTION 2: HAZARD IDENTIFICATION****2.1 Classification of the substance or mixture****2.1.1 Classification according to Regulation (EC) No 1272/2008 [CLP]**

**GHS Class Phrases:** Hazardous to the aquatic environment, short term, acute, category 1  
Hazardous to the aquatic environment, long term, chronic, category 1



**Signal Words:** Warning.

**Hazard Statements:** H400 - Very toxic to aquatic life  
H410 - Very toxic to aquatic life with long lasting effects

**Precautionary Statement:** P273 - Avoid release to the environment  
P391 - Collect Spillage  
P501 - Dispose of contents/container in accordance with Local, State, Federal, and Provincial Regulations.

**2.3 Other Hazards:** None

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS****3.2 Mixtures**

<b>Zinc Oxide</b>	<b>CAS# 1314-13-2</b>	<b>0 – 90%</b>
	H315, H319, H400, H410	
	Skin Irritation, category 2	Eye Irritation, category 2
	Hazardous to the aquatic environment, short term, acute, category 1	
	Hazardous to the aquatic environment, long term, chronic, category 1	

<b>Proprietary</b>	<b>No Data</b>	<b>0 – 10%</b>
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<b>Magnesium Oxide</b>	<b>CAS # 1309-48-4</b>	<b>0 – 90%</b>
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<b>Aluminum Nitride</b>	<b>CAS # 24304-00-5</b>	<b>0 – 90%</b>
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<b>Aluminum Powder</b>	<b>CAS # 7429-90-5</b>	<b>0 – 90%</b>
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<b>Aluminum Oxide</b>	<b>CAS # 1344-28-1</b>	<b>0 – 90%</b>
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<b>Boron Nitride</b>	<b>CAS # 10043-11-5</b>	<b>0 – 90%</b>
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**Zinc Oxide Comment:** Skin and Eye irritation warnings are applicable to the loose powder form only and do not apply to this product

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**Product Name: HEAT SINK COMPOUND****SECTION 4. FIRST-AID MEASURES****4.1 Description of First Aid Measures****Eye Contact:** Immediately flush eyes with water for 15 to 20 minutes. Get medical attention if irritation or symptoms of overexposure persist.**Skin Contact:** Immediately wash skin with soap and water. Get medical attention if irritation develops or persists.**Inhalation:** If inhaled remove to fresh air. If not breathing give artificial respiration or oxygen by a trained personnel. Seek immediate medical attention.**Ingestion:** If swallowed do not induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.**4.2 Most important symptoms and effects both acute and delayed****Other First Aid:** Exposure to soldering fumes and vapors may be irritation to the eyes, respiratory system and skin.**4.3 Indication of immediate medical attention and special treatment needed****Note to Physicians:** none**SECTION 5. FIRE FIGHTING MEASURES****5.1 Extinguishing Media****Extinguishing Media:** Foam, carbon dioxide, dry chemical, water fog or spray.**Unsuitable Media:** Not determined**5.2 Special hazards arising from the substance or mixture****Unusual Fire Hazards:** None known**5.3 Advice for firefighters****Fire Fighting Instructions:** Evacuate area of unprotected personnel. Use cold water spray to cool fireexposed containers to minimize risk of rupture. Do not enter confined fire space without full protective gear. If possible, contain fire run-off water.**Protective Equipment:** As in any fire, wear Self-Contained Breathing Apparatus (SCBA),MSHA/NIOSH (approved or equivalent) and full protective gear.**NFPA Fire:** 0**NFPA Health:** 1**NFPA Reactivity:** 0**SECTION 6. ACCIDENTAL RELEASE MEASURES****6.1 Personal precautions, protective equipment and emergency procedures****Personal Precautions:** Do not ingest. Use proper personal protective equipment as listed in Section 8, wear gloves.**6.2 Environmental precautions****Environmental Precautions:** Avoid run-off into storm sewers, ditches and waterways**6.3 Methods and materials for containment and cleaning up****Methods for Containment:** Collect product and repackage in a container.**Methods for Cleanup:** Use common solvents such as mineral spirits, acetone or IPA. Provide ventilation. After removal, flush spill area with soap and water to remove trace residue.**6.4 Reference to other sections****Other Spill Precautions:** See section 13 for disposal information

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**Product Name: HEAT SINK COMPOUND****SECTION 7. HANDLING AND STORAGE****7.1 Precautions for safe handling****Handling:** Use with adequate ventilation. Avoid breathing vapor and contact with eyes, skin and clothing.**Hygiene Practices:** Wash thoroughly after handling. Avoid contact with eyes and skin.**7.2 Conditions for safe storage, including any incompatibilities****Storage:** Store in a cool, dry, well ventilated area away from heat sources, combustible materials and incompatible substances. Keep container tightly closed when not in use.**7.3 Specific end use(s)****SECTION 8. EXPOSURE CONTROLS/ PERSONAL PROTECTION****8.2 Exposure controls****Engineering Controls:** Safety Glasses and Gloves are recommended for hygienic practice.**Ventilation:** Under normal conditions no special ventilation is needed.**Eye Protection:** Safety glasses are not necessary.**Skin Protection:** Gloves are not necessary.**Hygiene Practices:** Wash thoroughly after handling. Avoid contact with eyes and skin.**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES****9.1 Information on basic physical and chemical properties****Physical State:** Paste  
**Color:** White, off white or grey  
**Odor:** Odorless  
**pH:** Not determined  
**Melting Temperature:** Not determined  
**Boiling Temperature:** >400 F / >204 C**Flash Point:** Not determined  
**Ignition Temperature:** Not determined  
**Lower Flammable Limit:** Not determined  
**Upper Flammable Limit:** Not determined  
**Vapor Pressure:** Not determined  
**Vapor Density: Solubility:** Not determined  
**Specific Gravity:** Insoluble  
**Evaporation Rate:** 2.2 – 3.0 (H<sub>2</sub>O = 1)  
**Partition Coefficient:** < 0.01 (butyl acetate = 1)  
**Percent Volatile:** Not determined  
**VOC Content:** Not determined**Viscosity:** 100,000 – 1,500,000 cP@ 1, 10 sec-1 shear @ 25 C  
**Odor Threshold:** Not determined**Oxidizing Properties:** Not determined  
**Explosive Properties:** Not determined

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**Product Name: HEAT SINK COMPOUND****SECTION 10. STABILITY AND REACTIVITY****10.1 Reactivity****Reactivity:** No data available**10.2 Chemical Stability****Chemical Stability:** Stable under recommended handling and storage conditions**10.3 Possibility of hazardous polymerization****Hazardous Polymerization:** Will not occur**10.4 Conditions to avoid****Conditions to Avoid:** Heat, flames and sparks**10.5 Incompatible materials****Incompatible Materials:** Oxidizing agents.**10.6 Hazardous decomposition****Hazardous Decomposition:** Toxic gases such as ZnO fumes may be released in a fire**SECTION 11. TOXICOLOGICAL INFORMATION****11.1 Information on toxicological effects****PreExisting Conditions** None generally recognized.**Aggravated by Exposure:****Acute Inhalation Effects:** May be harmful if inhaled.**Acute Skin Effects: Acute** May cause skin irritation.**Ingestion Effects:** May be harmful if ingested.**Acute Eye Effects:** May cause eye irritation.**Zinc Oxide Eye Toxicity:** Administration into the eye – Rabbit Standard Draize test: 500mg/24H [Mild] (RTECS)**SECTION 12: ECOLOGICAL INFORMATION****12.1 Ecotoxicity****Ecotoxicity: Environmental** Harmful to aquatic organisms, may cause long term effects in the aquatic environment.**Stability:** No data available for this product.**12.3 Bioaccumulative potential****Bioaccumulation:** No data available for this product.**12.4 Mobility in soil****Mobility in environmental Media:** No data available for this product**SECTION 13. DISPOSAL CONSIDERATIONS****13.1 Waste treatment methods****Waste Disposal:** Dispose of in accordance with Local, State, Federal and Provincial regulations

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#### SECTION 14. TRANSPORTATION INFORMATION

	DOT Classification	TDG Classification	Mexico Classification	IMDG	IATA
<b>UN number</b>	Not available.	UN3077	UN3077	UN3077	UN3077
<b>UN proper shipping name</b>	Not available.	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (zinc oxide)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (zinc oxide)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (zinc oxide)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (zinc oxide)
<b>Transport hazard class(es)</b>	Not available.	9 	9 	9 	9 
<b>Packing group</b>	-	III	III	III	III
<b>Environmental hazards</b>	No.	Yes.	Yes.	Yes.	Yes.

#### Additional information

##### **TDG Classification**

Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.43-2.45 (Class 9), 2.7 (Marine pollutant mark). Non-bulk packages of this product are not regulated as dangerous goods when transported by road or rail.

##### **Mexico Classification**

The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.

##### **IMDG**

This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

##### **IATA**

This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.

##### **Special precautions for user**

**Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

##### **Transport in bulk according to IMO instruments**

: Not available.



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#### SECTION 15. REGULATORY INFORMATION

##### 15.1 Safety, health, and environmental regulations/legislation specific for the substance

##### Regulatory – Product Based

**SARA:** Listed, Zinc Compounds

##### Regulatory – Ingredient Based:

**Zinc Oxide:**  
**Canada DSL:** Listed  
**TSCA Inventory Status:** Listed  
**EC Number:** 215-222-5

#### SECTION 16: OTHER INFORMATION

GC Electronics believes that the information contained herein is accurate and reliable as of the date of this material safety data sheet, but no representation guarantee or warranty, express or implied, is made as to the accuracy, reliability or completeness of the information. Persons receiving information are encouraged to make their own determination as to the information's suitability and completeness for their particular application. NO INFORMATION CONTAINED HEREIN CONSTITUTES A PRODUCT WARRANTY OF ANY KIND, WHETHER EXPRESS OR IMPLIED; AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND OF FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED BY GC ELECTRONICS.

HMIS:

<b>Health</b>	1
<b>Flammability</b>	0
<b>Reactivity</b>	0
<b>PPE</b>	X