Sil-Free Plus - SAFETY DATA SHEET

SECTION 1: IDENTIFICATION

Product Name: Sil-Free Plus
Other means of identification: PN103700F00000G, PN103800F00000G, PN103900F00000G, PN104000F00000G, PN104100F00000G

Recommended Use: Heat Sink Compound

MANUFACTURER INFORMATION
Boyd
5960 Inglewood Dr. Suite 115
Pleasanton, CA 94588
(603)528-3400

EMERGENCY TELEPHONE NUMBER
ChemTel Inc.
(800)255-3924 (North America)
+1 (813)248-0585 (International)

SECTION 2: HAZARD IDENTIFICATION

Classification of the substance or mixture

Hazardous to the aquatic environment, short term, acute, category 1

Hazardous to the aquatic environment, long term, chronic, category 1

Label elements

GHS label elements

The substance is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms:**

· **Signal word:** Warning

· **Hazard statements:**

H400 – Very toxic to aquatic life

H410 – Very toxic to aquatic life with long lasting effects

· **Precautionary statements:**

P273 – Avoid release to the environment

P391 – Collect Spillage

P501 – Dispose of contents/container in accordance with Local, State, Federal, and Provincial Regulations.

· **Other hazard information:** The Zinc Oxide in this product is in paste form and does not pose a dust hazard.

SECTION 3: COMPOSITION

Components	WGT(%)*
Zinc Oxide 1314-13-2	0-90%
Other proprietary components	0-10%

Additional information: For the listed ingredient(s), the identity and/or exact percentage(s) are being withheld as a trade secret. For the wording of the listed Hazard Statements, refer to section 16.

SECTION 4: FIRST AID MEASURES

After inhalation: The Zinc Oxide in this product is in paste form and does not pose a dust hazard.

After skin contact: Immediately wash skin with soap and water. Get medical attention if irritation develops or persists.

After eye contact: Immediately flush eyes with water for 15 to 20 minutes. Get medical attention if irritation or symptoms of overexposure persist.

After ingestion: If swallowed do not induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

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.

SECTION 5: FIRE FIGHTING MEASURES

Extinguishing Media

- **Suitable extinguishing agents:** Foam, carbon dioxide, dry chemical, water fog or spray.
- **Unsuitable extinguishing agents:** Not determined.

Special hazards arising from the substance or mixture: None known

Advice for firefighters:

Evacuate area of unprotected personnel. Use cold water spray to cool fire exposed containers to minimize risk of rupture. Do not enter confined fire space without full protective gear. If possible, contain fire run-off water.

PPE: 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

Personal precautions, protective equipment and emergency procedures"
Do not ingest. Use proper personal protective equipment as listed in Section 8, wear gloves.

Environmental precautions:
Avoid run-off into storm sewers, ditches and waterways.

Methods and material for containment and cleaning up:
Collect product and repackage in a container.

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.

Reference to other sections

- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.

SECTION 7: HANDLING AND STORAGE

Handling

Precautions for safe 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.

Conditions for safe storage, including any incompatibilities:
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.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Components with limit values that require monitoring at the workplace:
Not applicable

Engineering controls:

· **Ventilation:** Use in a well ventilated area, no additional controls needed when used with adequate ventilation.

Exposure controls

· **General protective and hygienic measures:**
Wash thoroughly after handling. Avoid contact with eyes and skin.

Personal protective equipment

· **Eye Protection:** Wear safety glasses.

· **Skin Protection:** Wear gloves.

Additional information: The lists that were valid during the creation were used as basis.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Color:	White, off white, or gray
Odor:	Odorless
Odor threshold:	N/A
pH:	N/A
Solubility in water:	Insoluble
Boiling Point:	>400°F/ >204°C
Melting Point:	N/A
Flash Point:	565°F/296° (COC)
Flammability:	N/A
Auto-ignition:	N/A
Decomposition temp:	225°C
Danger of Explosion:	N/A
Vapor Pressure:	<0.1 mm Hg
Density (20 °C / 68 °F):	2.7 (H2O=1)
Vapor density:	N/A
Relative density:	2.4 g/cc
Viscosity:	870,000, 70,000 cP @ 1, 10 sec-1 shear @ 25°C
Evaporation Rate:	<0.01 (butyl acetate=1)

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable under recommended handling and storage conditions

Reactivity: None known

Possibility of Hazardous Reactions: None known

Incompatible materials: Oxidizing agents.

Thermal decomposition / conditions to be avoided: 225°C

Hazardous decomposition products: Toxic gases such as ZnO fumes may be released in a fire.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity

LD/LC50 values that are relevant for classification		
Zin Oxide (CAS No. 1314-13-2)		
Dermal	LD50	N/A
Oral	LD50	>5000 mg/kg (rat)
Probable route(s) of exposure:		
Skin:	May cause skin irritation	
Eye:	May cause eye irritation	
IARC (International Agency for Research on Cancer)		
None of the ingredients are listed.		
NTP (National Toxicology Program)		
None of the ingredients are listed.		
OSHA-Ca (Occupational Safety & Health Administration)		
None of the ingredients are listed.		

SECTION 12: ECOLOGICAL INFORMATION

Toxicity	
Aquatic toxicity:	Harmful to aquatic organisms, may cause long term effects in the aquatic environment.
Persistence and degradability:	N/A
Bioaccumulative potential:	N/A
Mobility in soil:	N/A
Additional ecological information	
General notes:	No additional data available
Results of PBT and vRvB assessment:	
PBT:	N/A
vRvB:	N/A
Other adverse effects:	
N/A	

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Recommendation:
Dispose of materials in accordance with local, state & federal regulations.

SECTION 14: TRANSPORTATION INFORMATION

• **UN Number:** • **DOT, ADR, IMDG, IATA**	UN3077
UN proper shipping name	
• **DOT**	Not regulated as hazardous material for transportation
• **IMDG, IATA**	Environmentally hazardous substance, solid, n.o.s (ZnO)
Transport hazard class(es)	
DOT	Not Regulated
IMDG, IAT 	
Hazard Class Packing Group	9 III
Environmental hazards	
Marine pollutant	Yes Symbol (fish and tree)

Always refer to federal, state, and local regulation for the most current regulatory requirements and information.

SECTION 15: REGULATORY INFORMATION

Safety, health, and environmental regulations /legislation specific for the substance or mixture

United States (USA)
SARA (Superfund Amendments and Reauthorization Act)
Listed, Zinc Compounds
TSCA (Toxic Substances Control Act)
Listed
Proposition 65 (California)
Not listed
EPA (Environmental Protection Agency)
1314-13-2 Zinc Oxide, II
Canada
Canadian Domestic Substances List (DSL):
Listed

Always refer to federal, state, and local regulation for the most current regulatory requirements and information.

GHS label elements

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· **Other hazard information:** The Zinc Oxide in this product is in paste form and does not pose a dust hazard.

SECTION 16: OTHER INFORMATION

Information Source and References

Website, OSHA (ecfr.gov)
Website, PubChem (https://pubchem.ncbi.nlm.nih.gov/ghs/)
Website, CAMEO Chemicals (cameochemicals.noaa.gov)
Website, US EPA Substance Registry Services (ofmpub.epa.gov/sorinternet/registry/substreg/home/overview/home.do)
Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)
Safety Data Sheets, Individual Manufacturers

Additional information

The information contained in this data sheet represents the best information currently available to us. However, no warranty is made with respect to its completeness, and we assume no liability resulting from its use.

Safety Data Sheet revised on March 16, 2023.