



Section 1: Identification of the Substance/Mixture and of the Company Undertaking

1.1 Product identifier

Product Name: Thermal Compound

Product Codes: 52022, 53299, 52038, 52055, 52054, 52056, 52051, 52060, 52160, 52030, 52130, 52034, 52039, 52153, 52070, 57000

Synonym: Thermal Grease, Thermal Interface Material, CPU Grease, Heat Sink Compound

1.2. Relevant identified uses of the substance or mixture and uses advised against

Product Restrictions: Not applicable.

1.3 Supplier's details

Manufacturer Name: Nordson EFD LLC

Manufacturer Address 1: 40 Catamore Boulevard

Manufacturer City: East Providence

Manufacturer State: Rhode Island

Manufacturer Zip Code: 02914

Manufacturer Country: USA

Business Phone: +1-401-431-7000

Other Phone: ChemTel: Outside of the US, Canada, Puerto Rico and the U.S. Virgin Islands:
+01-813-248-0585
China: 400-120-0751
Brazil: 0-800-591-6042
India: 000-800-100-4086
Mexico: 01-800-099-0731

Distributor: EFD International

Distributor Address 1: Unit 14, Apex Business Centre Boscombe Road

Distributor City: Dunstable, Bedfordshire

Distributor State: LU5 4SB England

Distributor Web: efdproductcompliance@nordsonefd.com

1.4 Emergency phone number

Emergency Phone: ChemTel Contract# MIS1138399
United States, Canada, Puerto Rico, and the U.S. Virgin Islands free phone number:
1-800-255-3924

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Notes from Section 1: Conforms to Regulation (EC) No. 1907/2006 (REACH)

Section 2: Hazards 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

2.2 Label elements:

Signal Words: 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.

2.3 Other hazards

Section 3: Composition/Information on Ingredients

3.2 Mixtures:

Ingredient Name				CAS Number	Ingredient Percent	EC Number	Comments
Zinc oxide				1314-13-2	0 - 90		
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
Proprietary				No data	0 - 10		
Magnesium oxide				1309-48-4	0 - 90		
Aluminum, powder				7429-90-5	0 - 90		

Zinc oxide:

Comments: *Zinc Oxide: Eye Irritation and Skin Irritation warnings are applicable to the loose powder form only and do not apply to this product*

Section 4: First Aid Measures

4.1 Description of first aid measures

Eye Contact: Immediately flush eyes with plenty of water for 15 to 20 minutes. Get medical attention, if irritation or symptoms of overexposure persists.

Skin Contact: Immediately wash skin with soap and plenty of water. Get medical attention if irritation develops or persists.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by 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: Exposures to soldering fumes and vapors may be irritating to eyes, respiratory system, and skin.

4.3 Indication of immediate medical attention and special treatment needed

Note To Physicians: None.

Section 5: Firefighting Measures

5.1 Extinguishing media

Extinguishing Media: Use alcohol resistant foam, carbon dioxide, dry chemical, or water fog or spray when fighting fires involving this material.

Unsuitable Media: Not determined.

5.2 Special hazards arising from the substance or mixture

Unusual Fire Hazards: None.

5.3 Advice for firefighters

Fire Fighting Instructions: 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.

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

Personnel Precautions: Do not ingest. Use proper personal protective equipment as listed in Section 8, wear gloves.

6.2 Environmental precautions

Environmental Precautions: Avoid runoff 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 or acetone. 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.

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 sources of heat, 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

8.1 Control parameters**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 and chemical properties

Physical State:	Paste.
Color:	White off-white or gray
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:	Not determined.
Solubility:	Insoluble
Specific Gravity:	2.2 – 3.0 (H ₂ O=1)
Evaporation Rate:	<0.01 (butyl acetate=1)
Partition Coefficient:	Not determined.
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 an oxidizer
Explosive Properties:	Not determined.

9.2 Other information

Section 10: Stability and Reactivity

10.1 Reactivity

Reactivity:	No data available
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10.2 Chemical Stability

Chemical Stability:	Stable under recommended handling and storage conditions.
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10.3 Possibility of hazardous reactions

Hazardous Polymerization:	Will not occur.
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10.4 Conditions To Avoid

Conditions To Avoid: Heat, flames and sparks

10.5 Incompatible Materials

Incompatible Materials: Oxidizing agents.

10.6 Hazardous Decomposition Products: Toxic gases such as zinc oxide fumes may be release in a fire

Section 11: Toxicological Information

11.1 Information on toxicological effects**Product:**

PreExisting Conditions None generally recognized.

Aggravated by Exposure:

Acute Inhalation Effects: May be harmful if inhaled.

Acute Skin Effects: May cause skin irritation.

Acute 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: 500 mg/24H [Mild] (RTECS)

Section 12: Ecological Information

12.1 Ecotoxicity**Product:**

Ecotoxicity: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Environmental Stability: No data available for this product.

12.3 Bioaccumulative potential**Product:**

BioAccumulation: No data available for this product.

12.4 Mobility in soil**Product:**

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.

Section 14: Transport Information

DOT Shipping Name: Not regulated as hazardous material for transportation.

DOT UN Number: Not regulated as hazardous material for transportation.
IMDG Shipping Name: Environmentally hazardous substance, solid, n.o.s. (Zinc oxide)
IMDG UN Number: UN3077
IMDG Hazard Class: 9
IMDG Packing Group: III
IATA Shipping Name: Environmentally hazardous substance, solid, n.o.s. (Zinc oxide)
IATA UN Number: UN3077
IATA Hazard Class: III
IATA Subrisk: 9
RID/ADR Shipping Name: Environmentally hazardous substance, solid, n.o.s. (Zinc oxide)
RID/ADR UN Number: UN3077
RID/ADR Hazard Class: 9
RID/ADR Packing Group: III

Section 15: Regulatory Information

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

Regulatory - Product Based:

SARA:
 Listed, Zinc Compounds

Regulatory - Ingredient Based:

Zinc oxide:

Canada DSL: Listed

TSCA Inventory Status: Listed

EC Number: 215-222-5

15.2 Chemical Safety Assessment

Section 16: Additional Information

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Disclaimer: The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. Additionally, Nordson EFD LLC assumes no responsibility for injury to the end user proximately caused by the material even if reasonable safety procedures are followed. The end user assumes the risk in his use of this material.

HMIS:

Health	1
Flammability	0
Reactivity	0
PPE	X

Chronic Health Hazard

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