

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Printing date 26.07.2013

Revision: 26.07.2013

1 Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name:** Thermalcote I
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the preparation** Heat transfer fluid
- **1.3 Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
AAVID Thermalloy, LLC
80 Commercial Street
Concord, NH 03301
(603) 224-9988
- **1.4 Emergency telephone number:**
ChemTel Inc.
(800)255-3924, +1 (813)248-0585



2 Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
Not applicable.



N; Dangerous for the environment

R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

- **Information concerning particular hazards for human and environment:**
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- **Classification system:**
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.
The classification is in accordance with the latest editions of international substances lists, and is supplemented by information from technical literature and by information provided by the company.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.

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- **Hazard pictograms**



GHS09

- **Signal word** Warning

- **Hazard statements**

H410 Very toxic to aquatic life with long lasting effects.

- **Precautionary statements**

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read label before use.

P273 Avoid release to the environment.

P391 Collect spillage.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Hazard description:**

- **WHMIS-symbols:** Not hazardous under WHMIS.

- **NFPA ratings (scale 0 - 4)**

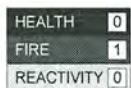


Health = 0

Fire = 1

Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



Health = 0

Fire = 1

Reactivity = 0

- **HMIS Long Term Health Hazard Substances**

None of the ingredients is listed.

- **2.3 Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.



- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **3.2 Mixtures**

- **Description:** Mixture of substances listed below with nonhazardous additions.

- **Dangerous components:**

CAS: 1314-13-2	zinc oxide	25-50%
EINECS: 215-222-5	 N R50/53	
Index number: 030-013-00-7	 Aquatic Acute 1, H400; Aquatic Chronic 1, H410	

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· **Additional information:** For the wording of the listed risk phrases refer to section 16.

4 First aid measures

- **4.1 Description of first aid measures**
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
Generally the product does not irritate the skin.
Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:**
Do not induce vomiting; call for medical help immediately.
Rinse out mouth and then drink plenty of water.
- **4.2 Most important symptoms and effects, both acute and delayed** Gastric or intestinal disorders.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.
- **Additional information** Cool endangered receptacles with water spray.

6 Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation
- **6.2 Environmental precautions:**
Do not allow to penetrate the ground/soil.
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:** Pick up mechanically.
- **6.4 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.

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7 Handling and storage

- **7.1 Precautions for safe handling** Store in cool, dry place in tightly closed receptacles.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Store away from oxidizing agents.
- **Further information about storage conditions:** None.
- **7.3 Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

8.1 Control parameters

- **Ingredients with limit values that require monitoring at the workplace:**

1314-13-2 zinc oxide

PEL (USA)	15* 5** 5*** mg/m ³ *total dust **respirable dust ***fume
REL (USA)	Short-term value: C 15* 10** mg/m ³ Long-term value: 5* 5** mg/m ³ *dust only **fume
TLV (USA)	Short-term value: 10* mg/m ³ Long-term value: 2* mg/m ³ *as respirable fraction
EL (Canada)	Short-term value: 10 mg/m ³ Long-term value: 2 mg/m ³
EV (Canada)	Short-term value: 10 mg/m ³ Long-term value: 2 mg/m ³ respirable

- **Additional information:** The lists valid during the making were used as basis.

8.2 Exposure controls

Personal protective equipment:

- **General protective and hygienic measures:** Wash hands before breaks and at the end of work.
- **Respiratory protection:** Use suitable respiratory protective device when high concentrations are present.
- **Protection of hands:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several

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substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:** Not required.

- **Body protection:** Protective work clothing

9 Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form: Pasty

Colour: White

- **Odour:** Characteristic

- **Odour threshold:** Not determined.

- **pH-value:** Not applicable.

- **Change in condition**

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: > 260 °C

- **Flash point:** 321 °C

- **Flammability (solid, gaseous):** Not determined.

- **Ignition temperature:**

Decomposition temperature: Not determined.

- **Self-igniting:** Product is not self-igniting.

- **Danger of explosion:** Product does not present an explosion hazard.

- **Explosion limits:**

Lower: Not determined.

Upper: Not determined.

- **Vapour pressure:** Not applicable.

- **Density at 20 °C:** 1,6 g/cm³

- **Relative density** Not determined.

- **Vapour density** Not applicable.

- **Evaporation rate** Not applicable.

- **Solubility in / Miscibility with water:**

Insoluble.

- **Partition coefficient (n-octanol/water):** Not determined.

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- | | |
|--------------------------------|--|
| · Viscosity: | |
| Dynamic: | Not applicable. |
| Kinematic: | Not applicable. |
| · Solvent content: | |
| Organic solvents: | 0,0 % |
| · 9.2 Other information | No further relevant information available. |

10 Stability and reactivity

- **10.1 Reactivity**
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:**
Carbon monoxide and carbon dioxide
Hydrocarbons

11 Toxicological information

- **11.1 Information on toxicological effects**
 - **Acute toxicity:**
- | | |
|--|-------------------------|
| · LD/LC50 values relevant for classification: | |
| 1314-13-2 zinc oxide | |
| Oral | LD50 > 5000 mg/kg (rat) |
- **Primary irritant effect:**
 - **on the skin:** No irritant effect.
 - **on the eye:** No irritating effect.
 - **Sensitization:** No sensitizing effects known.

12 Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Very toxic for fish

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- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Very toxic for aquatic organisms
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

13 Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- | | |
|---|---|
| <ul style="list-style-type: none"> · 14.1 UN-Number · DOT, ADR, IMDG, IATA | UN3077 |
| <ul style="list-style-type: none"> · 14.2 UN proper shipping name · DOT, IATA · ADR · IMDG | ENVIRONMENTALLY HAZARDOUS SUBSTANCE,
SOLID, N.O.S. (zinc oxide)
3077 ENVIRONMENTALLY HAZARDOUS
SUBSTANCE, SOLID, N.O.S. (zinc oxide)
ENVIRONMENTALLY HAZARDOUS SUBSTANCE,
SOLID, N.O.S. (zinc oxide), MARINE POLLUTANT |
| <ul style="list-style-type: none"> · 14.3 Transport hazard class(es) · DOT, IMDG, IATA | |
|   | |
| <ul style="list-style-type: none"> · Class · Label | 9 Miscellaneous dangerous substances and articles.
9 |

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· ADR



· Class

9 (M7) Miscellaneous dangerous substances and articles.

· Label

9

· 14.4 Packing group

· DOT, ADR, IMDG, IATA

III

· 14.5 Environmental hazards:

Product contains environmentally hazardous substances: zinc oxide

· Marine pollutant:

Yes

· Special marking (ADR):

Symbol (fish and tree)

· Special marking (IATA):

Symbol (fish and tree)

Symbol (fish and tree)

· 14.6 Special precautions for user

Warning: Miscellaneous dangerous substances and articles.

· Danger code (Kemler):

90

· EMS Number:

F-A,S-F

· 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

· Transport/Additional information:

· ADR

· Limited quantities (LQ)

5 kg

· Transport category

3

· Tunnel restriction code

E

· UN "Model Regulation":

UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (zinc oxide), 9, III

15 Regulatory information

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

· United States (USA)

· SARA

· Section 355 (extremely hazardous substances):

None of the ingredients is listed.

· Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

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<ul style="list-style-type: none"> · TSCA (Toxic Substances Control Act):
All ingredients are listed.
<ul style="list-style-type: none"> · Proposition 65 (California):
<ul style="list-style-type: none"> · Chemicals known to cause cancer:
Warning: This product may contain the following substance, known to the state of California to cause cancer.
None of the ingredients is listed.
<ul style="list-style-type: none"> · Chemicals known to cause reproductive toxicity for females:
None of the ingredients is listed.
<ul style="list-style-type: none"> · Chemicals known to cause reproductive toxicity for males:
None of the ingredients is listed.
<ul style="list-style-type: none"> · Chemicals known to cause developmental toxicity:
None of the ingredients is listed.
<ul style="list-style-type: none"> · Carcinogenic Categories
<ul style="list-style-type: none"> · EPA (Environmental Protection Agency)
1314-13-2 zinc oxide
II
<ul style="list-style-type: none"> · IARC (International Agency for Research on Cancer)
None of the ingredients is listed.
<ul style="list-style-type: none"> · TLV (Threshold Limit Value established by ACGIH)
None of the ingredients is listed.
<ul style="list-style-type: none"> · NIOSH-Ca (National Institute for Occupational Safety and Health)
None of the ingredients is listed.
<ul style="list-style-type: none"> · OSHA-Ca (Occupational Safety & Health Administration)
None of the ingredients is listed.
<ul style="list-style-type: none"> · Canada
<ul style="list-style-type: none"> · Canadian Domestic Substances List (DSL)
All ingredients are listed.
<ul style="list-style-type: none"> · Canadian Ingredient Disclosure list (limit 0.1%)
None of the ingredients is listed.
<ul style="list-style-type: none"> · Canadian Ingredient Disclosure list (limit 1%)
1314-13-2 zinc oxide
<ul style="list-style-type: none"> · 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**

- H400 Very toxic to aquatic life.

- H410 Very toxic to aquatic life with long lasting effects.

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R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent