

SAFETY DATA SHEET

Regulation (EC) No 1907/2006 (REACH)
(COMMISSION REGULATION (EU) 2015/830)

Version 1
Product Name HTK-002-U1

Issue Date 03-Feb-2016
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SECTION 1: Identification of the substance /mixture and of the company/undertaking

1.1. Product identifier

Product Name HTK-002-U1
Product Code High Performance Thermal Compound Kit

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

Recommended Use Thermal grease
Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

Supplier Cooler Master Technology Inc.
Address 5th Floor, Building B, No. 18, Hechang East Road, Zhongkai Hi-tech Zone, Huizhou
Postal Code 516006
Phone +86-752-2608-905
FAX +86-752-2608-899
E-mail Oscar_Wang@coolermaster.com.cn

Importer
Address
Postal Code
Phone
FAX
E-mail



1.4. Emergency telephone number

Asia Pacific Tel: +886-2-2225-3517
China Tel: +86-21-51872177
Europe Tel: +31-(0)40-702-0900
North America Tel: +1-888-624-5099

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]
Chronic aquatic toxicity Category 2 - (H411)

2.2. Label elements

Symbols/Pictograms



Signal word None
Hazard Statements H411 - Toxic to aquatic life with long lasting effects
Precautionary Statements P273 - Avoid release to the environment
P391 - Collect spillage
P501 - Dispose of contents/ container to an approved waste disposal plant
EU Specific Hazard Statements None.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients**3.1 Mixture**

| Chemical Name | EC No | CAS No | Weight-% | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|-------------------|-----------|------------|----------|---|
| Aluminum oxide | 215-691-6 | 1344-28-1 | 29.8 | Not classified |
| Zinc oxide | 215-222-5 | 1314-13-2 | 19.9 | Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) |
| Silicon dioxide | 238-878-4 | 14808-60-7 | 13.8 | Not classified |
| Titanium dioxide | 215-280-1 | 1317-70-0 | 2.9 | Not classified |
| Calcium carbonate | 207-439-9 | 471-34-1 | 1.2 | Not classified |
| Stearic acid | 200-313-4 | 57-11-4 | 0.1 | Not classified |
| Palmitic acid | 200-312-9 | 57-10-3 | 0.1 | Not classified |
| Magnesium oxide | 215-171-9 | 1309-48-4 | 0.1 | Not classified |

SECTION 4: First aid measures**4.1. Description of first aid measures****General advice**

No hazards which require special first aid measures. Immediate medical attention is not required.

Inhalation

Not an expected route of exposure. Immediate medical attention is not required.

Skin Contact

No special technical protective measures are necessary. Immediate medical attention is not required.

Eye contact

Not an expected route of exposure. Do not rub affected area.

Ingestion

Not an expected route of exposure. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

4.2. Most important symptoms and effects, both acute and delayed

No information available.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

No information available.

5.2. Special hazards arising from the substance or mixture

No information available.

5.3. Advice for firefighters

Evacuate personnel to safe areas. Move containers from fire area if you can do it without risk. Cool drums with water spray. Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Stay upwind. Ensure adequate ventilation, especially in confined areas.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation, especially in confined areas. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Avoid contact with eyes. Avoid generation of dust. Do not breathe dust.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Sweep up and placing in appropriate containers for disposal.

6.4. Reference to other sections

See Section 7 for more information

See section 8 for more information

See section 13 for more information

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Ensure adequate ventilation, especially in confined areas. Keep away from heat, sparks, flame and other sources of ignition. Avoid contact with eyes. Avoid generation of dust. Do not breathe dust.

7.2. Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition. Store in accordance with local regulations.

7.3. Specific end use(s)

Apart from the uses mentioned in SECTION 1.2 no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

| Chemical Name | Australia | Austria | Belgium | Denmark | European Union |
|-------------------------------------|--|---|---------|--|----------------|
| Aluminum oxide (CAS #: 1344-28-1) | 10 mg/m ³ | STEL 10 mg/m ³ TWA: 5 mg/m ³ | - | TWA: 5 mg/m ³ TWA: 2 mg/m ³ | - |
| Zinc oxide (CAS #: 1314-13-2) | 10 mg/m ³ 5 mg/m ³ 10 mg/m ³ STEL | TWA: 5 mg/m ³ | - | TWA: 4 mg/m ³ | - |
| Silicon dioxide (CAS #: 14808-60-7) | 0.1 mg/m ³ | TWA: 0.15 mg/m ³ | - | TWA: 0.3 mg/m ³ TWA: 0.1 mg/m ³ | - |
| Calcium carbonate (CAS #: 471-34-1) | 10 mg/m ³ | - | - | - | - |
| Magnesium oxide (CAS #: 1309-48-4) | 10 mg/m ³ | STEL 20 mg/m ³ STEL 10 mg/m ³ TWA: 5 mg/m ³ TWA: 10 mg/m ³ | - | TWA: 6 mg/m ³ | - |

| Chemical Name | Latvia | France | Finland | Germany | Italy |
|-----------------------------------|--------------------------|---------------------------|---------|--|-------|
| Aluminum oxide (CAS #: 1344-28-1) | TWA: 6 mg/m ³ | TWA: 10 mg/m ³ | - | TWA: 4 mg/m ³ TWA: 1.5 mg/m ³ Skin | - |

| | | | | | |
|-------------------------------------|----------------------------|---|--|---|---|
| Zinc oxide (CAS #: 1314-13-2) | TWA: 0.5 mg/m ³ | TWA: 5 mg/m ³ TWA: 10 mg/m ³ | TWA: 2 mg/m ³ STEL: 10 mg/m ³ | TWA: 1 mg/m ³ TWA: 0.1 mg/m ³ TWA: 2 mg/m ³ Ceiling / Peak: 2 mg/m ³ Ceiling / Peak: 0.4 mg/m ³ Ceiling / Peak: 4 mg/m ³ | - |
| Silicon dioxide (CAS #: 14808-60-7) | | TWA: 0.1 mg/m ³ | TWA: 0.05 mg/m ³ | Skin | - |
| Calcium carbonate (CAS #: 471-34-1) | TWA: 6 mg/m ³ | TWA: 10 mg/m ³ | - | - | - |
| Magnesium oxide (CAS #: 1309-48-4) | | TWA: 10 mg/m ³ | - | TWA: 1.5 mg/m ³ TWA: 4 mg/m ³ | - |

| Chemical Name | Poland | Portugal | Spain | Switzerland | Netherlands |
|-------------------------------------|--|--|--|---|------------------------------|
| Zinc oxide (CAS #: 1314-13-2) | STEL: 10 mg/m ³ TWA: 5 mg/m ³ | STEL: 10 mg/m ³ TWA: 2 mg/m ³ | STEL: 10 mg/m ³ TWA: 2 mg/m ³ | STEL: 3 mg/m ³ TWA: 3 mg/m ³ | - |
| Silicon dioxide (CAS #: 14808-60-7) | - | - | - | - | TWA: 0.075 mg/m ³ |
| Calcium carbonate (CAS #: 471-34-1) | TWA: 10 mg/m ³ | TWA: 10 mg/m ³ | - | TWA: 3 mg/m ³ | - |

| Chemical Name | Norway | United Kingdom | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|-------------------------------------|--|----------------|--|---|--|
| Aluminum oxide (CAS #: 1344-28-1) | TWA: 10 mg/m ³ STEL: 10 mg/m ³ | - | TWA: 1 mg/m ³ respirable fraction | - | - |
| Zinc oxide (CAS #: 1314-13-2) | TWA: 5 mg/m ³ STEL: 10 mg/m ³ | - | STEL: 10 mg/m ³ respirable fraction TWA: 2 mg/m ³ respirable fraction | TWA: 5 mg/m ³ fume TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 5 mg/m ³ fume (vacated) TWA: 10 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction (vacated) STEL: 10 mg/m ³ fume | IDLH: 500 mg/m ³ Ceiling: 15 mg/m ³ dust TWA: 5 mg/m ³ dust and fume STEL: 10 mg/m ³ fume |
| Silicon dioxide (CAS #: 14808-60-7) | TWA: 0.3 mg/m ³ TWA: 0.1 mg/m ³ STEL: 0.3 mg/m ³ STEL: 0.1 mg/m ³ | - | TWA: 0.025 mg/m ³ respirable fraction | - | IDLH: 50 mg/m ³ respirable dust TWA: 0.05 mg/m ³ respirable dust |
| Calcium carbonate (CAS #: 471-34-1) | - | - | - | - | TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust |
| Magnesium oxide (CAS #: 1309-48-4) | TWA: 10 mg/m ³ STEL: 20 mg/m ³ | - | TWA: 10 mg/m ³ inhalable fraction | - | IDLH: 750 mg/m ³ fume |

Derived No Effect Level (DNEL)

No information available

Predicted No Effect Concentration (PNEC)

No information available

8.2. Exposure controls

Engineering Controls

Ensure adequate ventilation, especially in confined areas. Remove all sources of ignition.

Personal protective equipment

- Eye/face protection Avoid contact with eyes.
- Hand Protection No special technical protective measures are necessary.
- Skin and body protection No special technical protective measures are necessary.
- Respiratory protection Ensure adequate ventilation, especially in confined areas.

Environmental exposure controls

Do not allow into any sewer, on the ground or into any body of water.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

| | |
|--------------------------------|--------------------|
| Appearance | Solid |
| Color | White |
| Odor | Odorless |
| Odor Threshold | Not determined |
| pH | Not determined |
| Melting point/freezing point | Not determined |
| Boiling point / boiling range | Not determined |
| Flash point | Not applicable |
| Evaporation rate | Not determined |
| Flammability (solid, gas) | Not flammable |
| Explosive limits | Not applicable |
| Vapor Pressure | Not determined |
| Vapor density | Not applicable |
| Density | Not determined |
| Relative density | Not determined |
| Water solubility | Insoluble in water |
| Partition coefficient (LogPow) | Not determined |
| Autoignition temperature | Not applicable |
| Decomposition temperature | Not determined |
| Kinematic viscosity | Not determined |
| Dynamic viscosity | Not determined |
| Explosive properties | Not an explosive |
| Oxidizing properties | Not determined |

9.2. Other information

No information available

SECTION 10: Stability and reactivity**10.1. Reactivity**

No information available.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

None under normal processing.

10.4. Conditions to avoid

Incompatible materials.

10.5. Incompatible materials

Strong acids.

10.6. Hazardous decomposition products

None under normal use conditions.

SECTION 11: Toxicological information**11.1. Information on toxicological effects**

Acute toxicity

| Chemical Name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|-------------------------------------|----------------------|------------------------|--------------------------|
| Aluminum oxide (CAS #: 1344-28-1) | 5000 mg/kg (Rat) | - | - |
| Zinc oxide (CAS #: 1314-13-2) | > 5000 mg/kg (Rat) | - | - |
| Calcium carbonate (CAS #: 471-34-1) | > 2000 mg/kg bw(rat) | > 2000 mg/kg bw(rat) | > 3 mg/L(rat) |
| Stearic acid (CAS #: 57-11-4) | > 5000 mg/kg bw rat | > 2000 mg/kg bw rabbit | > 0.1621 mg/L/4h air rat |
| Palmitic acid (CAS #: 57-10-3) | > 5000 mg/kg bw rat | > 2000 mg/kg bw rabbit | > 0.1621 mg/L air rat |

Skin corrosion/irritation

Non-irritating to the skin.

Serious eye damage/eye irritation

No eye irritation.

Sensitization

No sensitization responses were observed.

Germ cell mutagenicity

No information available.

Carcinogenicity

| Chemical Name | European Union | IARC |
|-------------------------------------|----------------|---------|
| Silicon dioxide (CAS #: 14808-60-7) | - | Group 1 |

Reproductive toxicity

No information available.

STOT - single exposure

No information available.

STOT - repeated exposure

No information available.

Aspiration hazard

No information available.

SECTION 12: Ecological information**12.1. Toxicity**

| Chemical Name | Algae/aquatic plants EC50 | Fish LC50 | Crustacea EC50 |
|-------------------------------------|---------------------------|--------------------------------------|--------------------------------|
| Calcium carbonate (CAS #: 471-34-1) | - | > 100: 96 h Oncorhynchus mykiss LC50 | > 100: 48 h Daphnia magna EC50 |
| Stearic acid (CAS #: 57-11-4) | NOEC 1016 mg/L | 10000 mg/L/48h Leuciscus idus | > 20 mg/L/48h Artemia salina |
| Palmitic acid (CAS #: 57-10-3) | > 0.9 mg/L/72 h | 1000 mg/L/96 h | > 4.8 mg/L/48 h |

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

No information available.

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

PBT/vPvB assessment information is not available as chemical safety assessment not conducted.

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations**13.1. Waste treatment methods**

Waste from residues/unused products Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Disposal should be in accordance with applicable regional, national and local laws and regulations.

SECTION 14: Transport information

14.1. UN number 3077

14.2. UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S (Containing zinc oxide)

14.3. Transport hazard class(es) 9

14.4. Packing group III

14.5. Environmental hazards Marine pollutant

14.6. Special precautions for user No information available

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code Does not apply

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**
European Union

| Component | EINECS/ELINCS | SVHC candidates | RESTRICTIONS - REACH TITLE VIII |
|--|---------------|-----------------|---------------------------------|
| Aluminum oxide 1344-28-1 (29.8) | X | - | - |
| Zinc oxide 1314-13-2 (19.9) | X | - | - |
| Silicon dioxide 14808-60-7 (13.8) | X | - | - |
| Titanium dioxide 1317-70-0 (2.9) | X | - | - |
| Calcium carbonate 471-34-1 (1.2) | X | - | - |
| Stearic acid 57-11-4 (0.1) | X | - | - |
| Palmitic acid 57-10-3 (0.1) | X | - | - |
| Magnesium oxide 1309-48-4 (0.1) | X | - | - |

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Take note of Directive 94/33/EC on the protection of young people at work

Take note of Directive 92/85/EC on the protection of pregnant and breastfeeding women at work

International Inventories

| Component | TSCA | DSL/NDSL | ENCS | IECSC | KECL | PICCS | AICS |
|--|------|----------|------|-------|------|-------|------|
| Aluminum oxide 1344-28-1 (29.8) | X | X | X | X | X | X | X |
| Zinc oxide 1314-13-2 (19.9) | X | X | X | X | X | X | X |
| Silicon dioxide 14808-60-7 (13.8) | X | X | X | X | X | X | X |
| Titanium dioxide 1317-70-0 (2.9) | X | X | X | X | X | X | X |
| Calcium carbonate 471-34-1 (1.2) | X | X | X | X | X | X | X |
| Stearic acid 57-11-4 (0.1) | X | X | X | X | X | X | X |
| Palmitic acid 57-10-3 (0.1) | X | X | X | X | X | X | X |
| Magnesium oxide 1309-48-4 (0.1) | X | X | X | X | X | X | X |

"-" Not Listed

"X" Listed

15.2. Chemical safety assessment

No information available.

SECTION 16: Other information

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

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Revision Note Not applicable

Key or legend to abbreviations and acronyms used in the safety data sheet

TWA - TWA (time-weighted average)

STEL - STEL (Short Term Exposure Limit)

Ceiling - Maximum limitvalue

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

Full text of H-Statements referred to under section 3

H400 - Very toxic to aquatic life

H410 - Very toxic to aquatic life with long lasting effects

Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

----- End of Safety Data Sheet -----