Create Date:
 02.03.2015

 Revised Date:
 10.09.2015

 Valid from:
 10.09.2015

Version: 1.01 Replaces Version: 1.00

1. <u>Identification of the substance or mixture and of the company</u>

1.1 Productidentificator

Chemical / Trade Name: Thermal Grizzly Kryonaut

Andere Bezeichnungen: Wärmeleitpaste Kryonaut / Thermal Grease Kryonaut / Kryonaut

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

Relevant identified uses: Thermal compound application

Uses advised against by those: Any use in food handling.

1.3 Details of the supplier of the safety data sheet Supplier:

Thermal Grizzly - Eike Salow

Street / PO Box

Emmy-Beckmann-Weg 32

Country code. / ZIP / City

D-22455 Hamburg

Contact for technical information

support@thermal-grizzly.com

Phone / Fax / E-Mail

+49 (0)40 532 788-50 / +49 (0)321 211 347-93 / E-Mail: support@thermal-grizzly.com

1.4 Emergency number

+49 (0)40 532 788-50

2. Possible dangers

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008, Annex VII (materials): Not determined

Classification according to Directive 67/548 / EEC or Directive 1999/45 / EC (substances and mixtures): R22, Harmful if swallowed.

2.2 Label elements

Label elements according to Regulation (EC) No. 1272/2008 (substances) / Directive 1999/45 / EC (mixtures)

Pictogram / Symbol:

None

/ R-phrases: R22 Harmful if swallowed

/ S-phrases: S2 Keep out of the reach of children.

Seite: 1 / 9

 Create Date:
 02.03.2015

 Revised Date:
 10.09.2015

 Valid from:
 10.09.2015

Version: 1.01 Replaces Version: 1.00

S24/25 Avoid contact with skin and eyes.

2.3 Other hazards

Physical and chemical hazards see Chapter 10

Environmental hazards Does not contain any PBT or vPvB substances. Other Hazards Other hazards were not at the current level of knowledge found.

3. Composition / information on ingredients

3.1 Ingredients

Main component of the substance

Chemical: AL Synoyms: Aluminium

CAS-No.: 7429-90-5

3.2 Mixtures

- (- Hazardous to health or environmental hazard,
 - Components with EU limit values for occupational exposure,
- Substances which are persistent according to the criteria in Annex XIII of the REACH Regulation, bioaccumulative

and toxic or very persistent and very bioaccumulative,

- Substances for reasons other than those specified in Article 31 paragraph 1 letter a of the REACH Regulation.

hazards listed in the list established in accordance with Article 59 paragraph 1 of the REACH Regulation (List of candidates) were recorded)

Classification according to Directive 67/548 / EEC: Not Applicable Classification according to Regulation (EC) No 1272/2008. Not Applicable

Mixtures Componets:

AL: CAS No.: 7429-90-5: >65% ZnO: CAS No.: 1314-13-2: <25% Siloxanes and Silicones: CAS No.:: >10%

4. First-aid measures

4.1 Description of first aid measures

General Notice: Contaminated clothing should be changed.

After inhalation

If difficulties occur after inhalation of vapor / aerosol has fresh air and seek medical attention

Seite: 2 / 9

 Create Date:
 02.03.2015

 Revised Date:
 10.09.2015

 Valid from:
 10.09.2015

Version: 1.01 Replaces Version: 1.00

After contact with skin

Wash thoroughly with soap and water, skin care. Change contaminated clothes.

After contact with eyes

In case of contact with eyes, rinse thoroughly with water.

In the event of symptoms refer for medical treatment

after swallowing

Rinse mouth and then drink plenty of water, NOT induce vomiting. Seek IMMEDIATE medical attention.

4.2 Both acute and delayed symptoms and effects

none known

4.3 Indication of immediate medical attention and special treatment

No special handling instructions needed.

5. Fire-fighting measures

5.1 Extinguishant

Suitable: Carbon dioxide, water spray, dry chemical, foam

Avoid: Full water jet

5.2 Special hazards arising from the substance or mixture Hazards

none known

5.3 Advice for firefighters

No special Advice needed

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

6.2 Environmental protection measures

6.3 Methods and material for containment and cleaning

Pick up mechanically

The absorbed material in accordance with section on waste disposal.

6.4 Reference to other sections

No further be observed.

7. Handling and storage

7.1 Precautions for safe handling

Accord with the putting and clicking of standard management of the storage

Seite: 3 / 9

 Create Date:
 02.03.2015

 Revised Date:
 10.09.2015

 Valid from:
 10.09.2015

Version: 1.01 Replaces Version: 1.00

7.2 Conditions for safe storage, including any incompatibilities

Avoid High Temperature at place of storage

Information on storage conditions

Ensure thorough ventilation of stores and work areas. Container after removal of product again immediately, because product takes up the humidity of the air. Avoid contact with eyes and skin contact.

7.3 Specific end use

Industry and sector-specific guidelines

There are to take measures against electrostatic charging and for good ventilation.

8. Limiting and monitoring exposure / personal protective equipment

8.1 Control parameters

8.1.1 Occupational exposure limits in the workplace and / or biological limit values Occupational Exposure Limits (OEL) Germany

None

8.2 Limiting and monitoring exposure

Technical measures and the selection of appropriate work processes have priority over the use personal protective equipment. The personal protective equipment varies depending on the amount and concentration set of hazardous substances in the workplace.

8.2.1 Appropriate engineering controls

Ensure good ventilation of the work space and / or suction at the workplace. the floor should not have a floor drain. Provide workplace washing facilities. Eyewash or Provide eye wash bottle.

8.2.2 Individual protection measures - personal protective equipment

The personal protective equipment varies depending on the amount and concentration of hazardous substances at the Establish workplace. Recommendation dustproof protective clothing, apron or lab coat Wear. General protective and hygiene measures - see Section 7.1

Eye / face protection

Safety glasses with side-shields conforming to EN 166 - is recommended

Skin Protection

Handle with gloves. Preventive skin protection recommended.

Gloves

Glove material: butyl rubber

Layer thickness (mm): 0.5mm (Category III) Breakthrough time (min.): <480min (EN374)

Body protection

Not needed - Wearing a lab coat is recommended.

Seite: 4/9

 Create Date:
 02.03.2015

 Revised Date:
 10.09.2015

 Valid from:
 10.09.2015

Version: 1.01 Replaces Version: 1.00

Respiratory Protection

Not needed - no requirements.

Technical risks:

Not needed - no requirements.

8.2.3 Delimitation and monitoring of environmental exposure

See Chapter 6 and 7

9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance

- Physical state: Paste - Colour: Gray odor: Slight odor **Odor threshold:** not applicable pH: 7.0-7.3 Melting point / freezing point: not determined Initial boiling point and boiling not determined range: Flash point:

Flash point: not determined
Evaporation rate: < 1 (Synthetic paraffin), (Butyl Acetate=1)

Flammability (solid, gaseous): not determined upper / lower flammability or not applicable

explosive limits:
Vapor pressure:
Neglibile at (25 degrees C)
Vapor density:
>1 (Synthetic paraffin)

relative density: 3.7

Solubility (ies): not applicable **Partition coefficient:** not applicable n-octanol / water: not determined Auto-ignition temperature: not applicable **Decomposition temperature:** not determined Viscosity: 130-170 Pas **Explosive properties:** not applicable Oxidising properties: not applicable

9.2 other Information

None

10. Stability and reactivity

Stable under ambient conditions. Product is stable: hazardous polymerization will not occur

10.1 Reactivity

When properly used, not known.

10.2 Chemical Stability

The product is stable under normal conditions.

10.3 Possibility of hazardous reactions

Seite: 5 / 9

 Create Date:
 02.03.2015

 Revised Date:
 10.09.2015

 Valid from:
 10.09.2015

Version: 1.01 Replaces Version: 1.00

When the product is heated above decomposition temperature toxic vapors is possible.

10.4 Conditions to avoid

Burning oft he the direct fire source

10.5 Incompatible materials

not determined

10.6 Hazardous decomposition products

No known dangerous decomposition products.

11. Toxicological information

11.1 Information on toxicological effects

acute toxicity

Not available, according to calculation method of the Preparations Directive.

Skin corrosion / irritation to the skin

not determined

serious eye damage / eye irritation

not determined

Respiratory sensitization / skin

not determined

Germ cell mutagenicity

not determined

Carcinogenicity

not determined

reproductive toxicity

not determined

specific target organ toxicity after single exposure

not determined

specific target organ toxicity after repeated exposure

not determined

Aspiration

not determined

12. Ecological information

12.1 Ecotoxicity

None

12.2 Persistence and degradability

None

12.3 Bioaccumulative

not determined

Seite: 6 / 9

 Create Date:
 02.03.2015

 Revised Date:
 10.09.2015

 Valid from:
 10.09.2015

Version: 1.01 Replaces Version: 1.00

12.4 Mobility in soil

not determined

12.5 Results of PBT and vPvB assessment

not determined

12.6 Other adverse effects

Absorbable organic bound halogens (AOX):

The product contains no organically-bound halogen.

Additional information:

Other ecotoxicological advice: The product was not tested. The statement has been derived from the properties of the individual components.

Prevent product from entering untreated into natural waters.

13. Disposal

13.1 Waste treatment methods

The industry that retrieves raw materials person of silicon retrieves the waste material , there are regular recovery prices.

Treatment of contaminated packaging

Non-contaminated packaging may be recycled Are fed Performs.

Waste code according to the Waste Catalogue (EWC)

070708 * Other still bottoms and reaction residues

150102 * plastic packaging

Special precautions

Contact with biological waste should be avoided.

Relevant EU or other regulations

no application

14. Transport information

Not Restricted under IATA RERULATION

14.1 UN-Number

None needed

14.2 UN proper shipping name

ADR / RID

Not needed

IMDG-Code / ICAO-TI / IATA-DGR

Not needed

14.3 Transport hazard class

none

14.4 Packaging group

Seite: 7 / 9

 Create Date:
 02.03.2015

 Revised Date:
 10.09.2015

 Valid from:
 10.09.2015

Version: 1.01 Replaces Version: 1.00

III

14.5 environmental hazards

Labelling not required for containers smaller 5kg / 5L

Indicator environmentally hazardous substances

ADR/RID / IMDG-Code / ICAO-TI / IATA-DGR: ☐ Yes / ■ No

Marine Pollutant: ☐ yes / ■ no

14.6 Special precautions for user

See Chapter 6-8

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Delivery takes place only in compliance with traffic laws and appropriate packaging. Possible national deviations in other countries are not considered.

15. Legislation

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

EU legislation as

Regulation (EC) No 2037/2000 (substances that deplete the ozone layer):

Not applicable

Regulation (EC) No 850/2004 (Persistent Organic Pollutants):

Not applicable

Regulation (EC) No 689/2008 (export and import of dangerous chemicals).:

Not applicable

Regulation (EC) No 648/2004 (the Detergents).:

Not applicable

Restrictions under Title VIII of Regulation (EC) 1907/2006:

None Available

National regulations as

Water hazard class

Not applicable

Solvent Ordinance (31 BlmSchV)

Not applicable

Störfallverordnung (12 BlmSchV)

Nicht anwendbar

Technical Instructions on Air Quality (TA Luft)

5.2.5 Organic Substances

Other relevant provisions

Hazardous Substances Ordinance - Ordinance on Hazardous Materials 2010: Washing and Cleansing Agents Act WRMG;

Seite: 8 / 9

 Create Date:
 02.03.2015

 Revised Date:
 10.09.2015

 Valid from:
 10.09.2015

Version: 1.01 Replaces Version: 1.00

Household water neck Act - WHG; TRG300; Technical Rule; 200, 220, 615.900, 905

15.2 Chemical Safety Assessment

Not applicable

16. Other Information

This information is based on present level of our knowledge, however, offers no assurance of product properties and establishes no contract legal rights.

Seite: 9 / 9