

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

Date: 1-June-2024

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

1.1 Product identifier

Commercial Name: ARCTIC MX-6 Thermal Compound
UFI: 0E50-208D-N00E-HCPJ
Part No. / UPC / EAN: ACTCP00079A/84003340172-2
ACTCP00080A/84003340173-9
ACTCP00081A/84003340174-6
ACTCP00084A/84003340175-3

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

Use of the substance or mixture: Thermal interface material for Electrical industry and electronics
Uses advised against: None known

1.3 Details of the supplier of the safety data sheet

Company:
ARCTIC (HK) Ltd.
Unit 1302-05, The Octagon
No.6 Sha Tsui Road
Tsuen Wan,
New Territories
Hong Kong
Email address: info@arctic.de

1.4 Emergency telephone number

German Tel : +49 531 60945294

Section 2: Hazards Identification

2.1 Classification of the substance or mixture

- **Classification according to Regulation (EC) No 1272/2008**

The product is not classified according to the CLP regulation.

- **Information concerning particular hazards for human and environment:**

The product has not to be labelled due to the calculation procedure of Regulation (EC) No. 1272/2008.

- **Classification system:**

The classification is according to the latest edition of EU Regulation (EC) No. 1272/2008, and extended by company and literature data.

2.2 Label elements

- **Labelling according to Regulation (EC) No. 1272/2008** Not applicable
- **Hazard pictograms** Not applicable

- Signal word Not applicable
- Hazard-determining components of labelling: Not applicable
- Hazard statements Not applicable
- Precautionary statements Not applicable

2.3 Other hazards

- Results of PBT and vPvB assessment
- PBT: Not applicable
- vPvB: Not applicable
- Determination of endocrine-disrupting properties Not applicable

Section 3: Composition/Information on Ingredients

3.1 Mixtures hazards

- Description:

Mixture of the substances listed below with nonhazardous additions. For the wording of the listed hazard statements refer to section 16.

Name	CAS-No.	EINECS/ ELINCS No	Conc. (% w/w)
Aluminum Substance with a Union workplace exposure limit	7429-90-5	231-072-3	79.3%
Aluminium oxide Substance with a Union workplace exposure limit	1344-28-1	215-691-6	13.9%
Polydimethylsiloxane	63148-62-9		6.5%
Melanins	8049-97-6		0.3%

Section 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.
- After eye contact: Rinse opened eye for several minutes under running water.
- After swallowing: If symptoms persist consult doctor.

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

No further relevant information available.

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

No further relevant information available

Section 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.

Section 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures:

Not required.

6.2 Environmental precautions:

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

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.

Section 7: Handling and Storage

7.1 Precautions for safe handling:

For the general occupational hygienic measures refer to Section 8.

- **Information about fire - and explosion protection:** No special measures required.

7.2 Conditions for safe storage, including any incompatibilities

- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **Further information about storage conditions:** None.

7.3 Specific end use(s):

No further relevant information

Section 8: ; Exposure Controls / Personal Protection

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:	
CAS: 7429-90-5 Aluminum (79.3%)	
AGW (Germany)	Long-term value: 1.25* 10** mg/m ³ 2(II);*alveolengängig**einatembar; AGS, DFG, Y
VLEP (France)	Long-term value: 5* 10** mg/m ³ *pulvérulent **métal
OEL (Ireland)	Long-term value: 1* mg/m ³ *metal, respirable fraction

CAS: 1344-28-1 Aluminum oxide(13.9%)	
AGW (Germany)	Long-term value: 1.25* 10** mg/m ³ 2(II);*alveolengängig**einatembar; AGS, DFG, Y
VLEP (France)	Long-term value: 10 mg/m ³ *pulvérulent **métal
OEL (Ireland)	Long-term value: 10*4** mg/m ³ *total inhalable** respirable dust

- Regulatory information

AGW (Germany): TRGS 900
VLEP (France): ED 1487 05.2021
OEL (Ireland): 2021 CoP for the Safety, Health and Welfare at Work

- DNELs: Not available
- PNECs: Not available

Ingredients with biological limit values:	
CAS: 7429-90-5 Aluminum	
BGW (Germany)	50 µg/g Kreatinin Untersuchungsmaterial: Urin Probennahmezeitpunkt: bei Langzeitexposition: am Schichtende nach mehreren vorangegangenen Schichten Parameter: Aluminium

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

8.2 Exposure controls

Based on the composition shown in Section 3, the following measures are suggested for occupational safety measure.

- **Appropriate engineering controls:**

Wash hands before breaks and at the end of work.

See Section 7 for information about design of technical facilities.

- **Individual protection measures, such as personal protective equipment**
- **Respiratory protection:** Not required.

- **Hand protection:**

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 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/face protection:** Goggles recommended during refilling

- **Body protection:** Protective work clothing

- **Thermal hazards:** Not required for normal conditions of use.

- **Environmental exposure controls:**

Control measures must be made in accordance with Community environmental protection legislation.

Section 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

○ Physical state:	Paste
○ Colour:	Grey
○ Odour:	Odorless
○ Odour threshold:	Not available
○ Melting point/Freezing point:	Not available
○ Boiling point or initial boiling point and boiling range:	Not available
○ Flammability:	Not available
○ Lower and upper explosion limit	
▪ Lower:	Not available
▪ Upper:	Not available
○ Flash point:	Not available
○ Auto-ignition temperature:	Not available
○ Decomposition temperature:	Not available
○ pH:	Not available
○ Viscosity	
▪ Kinematic viscosity:	Not available
▪ Dynamic viscosity:	Not available
○ Solubility	
▪ Water:	Not available
▪ Partition coefficient n-octanol/water (log value):	Not available

- *Vapour pressure:* Not available
- **Density and/or relative density**
 - *Density:* Not available
 - *Relative density:* Not available
 - *Relative vapour density:* Not available
 - *Particle characteristics:* Not available

9.2 Other information

- **Appearance**
- **Form:** Paste

9.3 Information with regard to physical hazard classes

- **Explosives:** Not applicable
- **Flammable gases:** Not applicable
- **Aerosols:** Not applicable
- **Oxidising gases:** Not applicable
- **Gases under pressure:** Not applicable
- **Flammable liquids:** Not applicable
- **Flammable solids:** Not applicable
- **Self-reactive substances and mixtures:** Not applicable
- **Pyrophoric liquids:** Not applicable
- **Pyrophoric solids:** Not applicable
- **Self-heating substances and mixtures:** Not applicable
- **Substances and mixtures, which emit flammable gases in contact with water:** Not applicable
- **Oxidising liquids:** Not applicable
- **Oxidising solids:** Not applicable
- **Organic peroxides:** Not applicable
- **Corrosive to metals:** Not applicable
- **Desensitised explosives:** Not applicable
- **Other safety characteristics:** Not available

Section 10: Stability and Reactivity

10.1 Reactivity:	No further relevant information available
10.2 Chemical stability:	No further relevant information available
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:	No dangerous decomposition products known.

Section 11: Toxicological Information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

- Acute toxicity
- LD/LC50 values relevant for classification: Not available
- Skin corrosion/irritation: Based on available data, the classification criteria are not met.
- Serious eye damage/irritation: Based on available data, the classification criteria are not met
- Respiratory or skin sensitization: Based on available data, the classification criteria are not met.
- Germ cell mutagenicity: Based on available data, the classification criteria are not met.
- Carcinogenicity: Based on available data, the classification criteria are not met.
- Reproductive toxicity: Based on available data, the classification criteria are not met.
- STOT-single exposure: Based on available data, the classification criteria are not met.
- STOT-repeated exposure: Based on available data, the classification criteria are not met.
- Aspiration hazard: Based on available data, the classification criteria are not met.

11.2 Information on other hazards

- Endocrine disrupting properties: None of the ingredients is listed.
- Other information: No further relevant information available

Section 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.

12.5 Results of PBT and vPvB assessment:

- **PBT:** Not applicable
- **vPvB:** Not applicable

12.6 Endocrine disrupting properties:

The product does not contain substances with endocrine disrupting properties

12.7 Other adverse effects:

No further relevant information available.

Section 13: Disposal Considerations

13.1 Other adverse effects:

- **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.

Section 14: Transport Information

- 14.1 UN number or ID number - ADR/RID/ADN, IMDG, IATA	Not applicable
- 14.2 UN proper shipping name - ADR/RID/ADN, IMDG, IATA	Not applicable
- 14.3 Transport hazard class(es) - ADR/RID/ADN, IMDG, IATA - Class Not applicable - Label	Not applicable -
- 14.4 Packing group - ADR/RID/ADN, IMDG, IATA	Not applicable
- 14.5 Environmental hazards: - Marine pollutant:	No
- 14.6 Special precautions for user: - Hazard identification number (Kemler code):	Not applicable -
- 14.7 Maritime transport in bulk according to IMO instruments	Not applicable
- 14.8 Transport/Additional information:	Not applicable
- UN "Model Regulation":	Not applicable

Section 15: Regulatory Information

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

- Directive 2012/18/EU
- Named dangerous substances - ANNEX I None of the ingredients is listed.
- Seveso category Not applicable
- Qualifying quantity (tonnes) for the application of lower-tier requirements Not applicable
- Qualifying quantity (tonnes) for the application of upper-tier requirements Not applicable

-	REGULATION (EU) 2019/1021 on persistent organic pollutants (POP)
	None of the ingredients is listed.

-	Regulation (EU) No 649/2012
	None of the ingredients is listed.

REGULATION (EU) 2019/1148

-	Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))
	None of the ingredients is listed.

-	Annex II - REPORTABLE EXPLOSIVES PRECURSORS
7429-90-5	Aluminum

-	Regulation (EC) No 273/2004 on drug precursors
	None of the ingredients is listed.

-	Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors
	None of the ingredients is listed.

-	REGULATION (EC) No 1005/2009 on substances that deplete the ozone layer – ANNEX I (Ozonedepleting potential)
	None of the ingredients is listed.

Other regulations, limitations and prohibitive regulations

-	SVHC Candidate List of REACH Regulation Annex XIV Authorisation (14/6/2023)
	None of the ingredients is listed.

- REACH Regulation Annex XVII Restriction (8/6/2023) See Section 16 for information about restriction of use.

None of the ingredients is listed.

- REACH Regulation Annex XIV Authorisation List (8/4/2022)
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None of the ingredients is listed.

15.2 Chemical safety assessment:

A Chemical Safety Assessment has not been carried out.

Section 16: Other Information

- Recommended restriction of use	Not applicable
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The contents and format of this SDS are in accordance with Regulation (EC) No 1907/2006, 1272/2008 and Regulation (EU) No 2020/878.

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- Abbreviations and acronyms:

- **ADR:** Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
- **IMDG:** International Maritime Code for Dangerous Goods
- **IATA:** International Air Transport Association
- **GHS:** Globally Harmonised System of Classification and Labelling of Chemicals
- **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)
- **DNEL:** Derived No-Effect Level (REACH)
- **PNEC:** Predicted No-Effect Concentration (REACH)
- **LC50:** Lethal concentration, 50 percent
- **LD50:** Lethal dose, 50 percent
- **PBT:** Persistent, Bioaccumulative and Toxic
- **vPvB:** very Persistent and very Bioaccumulative