

Create Date: 11/1/2023

Version: 2.00(Replaces Version1.0) Valid from: 9/28/2024

Safety Data Sheet (SDS) :

1. **PRODUCT AND COMPANY IDENTIFICATION**

PRODUCT NAME: Meta Online Liquid Metal Thermal Paste

PART NUMBERS: ML102

MANUFACTURER: Meta Online LLC

ADDRESS: 3044 John Hancock Dr. Virginia Beach VA 23452

PHONE: (757) 515-1160

EMERGENCY PHONE: Emergency Action: Please contact your doctor or local hospital.

PRODUCT USE: Mounting heat sinks, fills gaps and imperfections to improve thermal transfer.

2. **HAZARD IDENTIFICATION**2.1 **Classification (EC) No. 1272/2008**

No harmful product according (EC) No. 1272/2008

Additional hazard information for humans and environment: If the normal rules of industrial hygiene are observed, no significant risk is posed by handling this product. The product does not contain any fire or explosion risk.

2.2 **Label elements**

Label elements according to Regulation (EC) No. 1272/2008

GHS Classification (29 CFR 1910.1200): Corrosive to metals, category 1.

Pictogram / Symbol: slightly corrosive substance

**Signal Word:** Warning**Hazard statement(s)**

H290 May be corrosive to metals.

Precautionary statement(s)

P102 Keep out of the reach of children

P234 Keep only in original container, P390 Absorb spillage to prevent material damage

P262 Do not get in eyes, on skin, or on clothing.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P302 Avoid contact with skin (may cause skin irritation)

P305+P351+P338: Remove contact lenses if present and easy to do. Rinse cautiously with water for several minutes.

P406 Store in non-corrosive, non-metallic containers

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OTHER HAZARDS:

None known.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Classified in accordance with European CLP Regulation 1272/2008

Main component of the substance

Name of substance: Gallium

EC no.: CAS no.: 7440-55-3 EINECS no.: 231-163-8

Name of substance: Indium

EC no.: CAS no.: 7440-74-6 REACH EINECS no.: 231-180

Name of substance: Tin

EC no.: CAS no.: 7440-31-5 REACH EINECS no.: 231-141-8

Name of substance: Silver

EC no.: CAS no.: 7440-22-4 REACH EINECS no.: 231-131-3

4. FIRST-AID MEASURES**General information:** Remove patient from area of exposure.**Inhalation:** Remove to fresh air, keep warm and quiet, and give oxygen if breathing is difficult. Seek immediate medical attention.**Skin contact:** remove contaminated clothing, brush material off skin, and wash affected area with soap and water. Seek medical attention if irritation develops or persists.**Eye contact:** Flush eyes with lukewarm water, including under upper and lower eyelids, for at least 15 minutes. Seek medical attention if irritation develops or persists.**Ingestion:** Rinse mouth with water. Do not induce vomiting. Seek medical attention. Never induce vomiting or give anything by mouth to an unconscious person**Information for the doctor:** We are not aware of any special treatment required. Treat the symptoms.**5. FIREFIGHTING MEASURES****5.1 Extinguishing media**

Suitable extinguishing media: The product is not flammable. Unsuitable extinguishing media: Water-Spray is not suitable for the overheated substance.

5.2 Special risks posed by the substance or the preparation itself, its combustion products or gases emitted: If gases/oxides form, use protective equipment/breathing apparatus.**5.3 Special protective equipment when fighting fires:** Wear breathing apparatus that does not depend on ambient air supply.**5.4 Additional information:** None**6. ACCIDENTAL RELEASE MEASURES****6.1 Personal precautionary measures:** Slip hazard by run out or buried product**6.2 Environmental protection measures:** Take up the run out product. Supply the product remainders for disposal.**6.3 Cleaning methods:** Large quantities are absorbed (syringe) or up-turned. Remove any product residues by soap solution.**6.4 Additional references:** none**7. HANDLING AND STORAGE****HANDLING/STORAGE:** Keep containers tightly closed when not in use. Use care to avoid spills. Avoid inhalation of fumes or dust. Avoid contact with eyes, skin, and clothing. Store in a closed corrosive resistant container, with corrosive resistant liner, in cool dry place. Wear appropriate personal protective equipment when working with or handling. Always wash hands thoroughly after handling this product. Dispose of following Federal, State/Provincial, and Local regulations.**OTHER PRECAUTIONS:** Empty containers may retain product residues in vapor, liquid, and/or solid form. All labeled hazard precautions should
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WORK HYGIENIC PRACTICES: Cosmetics/Food/Drink/Tobacco should not be consumed or used in work areas. Always wash hands after handling material and before applying or using cosmetics/food/drink/tobacco.

SECTION 7 NOTES:

Keep out of reach of children.
Not for internal consumption.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters: none

8.2 Monitoring exposure / personal protective equipment

Respiratory protection: P3 respiratory protection in an emergency producing oxide fumes.

Hand protection: In case of repeated and continuous contact with skin, wear gloves of nitrile rubber. Use lipid-balancing cream, if required.

Eye protection: Wear safety goggles in case of possible eye contact through splashing.

Body protection: Wear suitable work clothing in case of splashing risk or other possible body contact

Information for work hygiene: Wash hands after work and before breaks. Industrial hygiene

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Silver Liquid metal alloy
Odor:	Odorless
Odor threshold:	not applicable
pH:	not applicable
Melting, Freezing Point:	<10°C
INITIAL BOILING POINT:	>1300°C
FLASH POINT:	not determined
EVAPORATION RATE:	not determined
FLAMMABILITY (solid):	not determined
UPPER/LOWER FLAMMABILITY:	not applicable
UPPER/LOWER EXPLOSIVE LIMITS:	not applicable
VAPOR PRESSURE (mmHg):	not determined
VAPOR DENSITY (AIR = 1):	not determined
RELATIVE DENSITY:	6.44
SOLUBILITY IN WATER:	not applicable
PARTITION COEFFICIENT (n-octanol/water):	not determined
AUTOIGNITION TEMPERATURE:	not applicable
DECOMPOSITION TEMPERATURE:	not determined
VISCOSITY:	0.4 Pas

No other information

10. STABILITY AND REACTIVITY

10.1 Reactivity:

The product amalgamates with metals on the surface like copper, tin, lead, zinc, gold and silver jewellery, particularly also with light metals on the surface, especially if these are free of oxides. If necessary, the product has to be tested for reactions to materials and chemical substances for a specific application.

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

10.3 Dangerous Reactivity: None, If used according to regulations.

10.4 Conditions to be avoided: With aluminum and with following addition of water exothermically.

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10.5 Substances to be avoided: Halogeneous one, hydrogen peroxide/hydrogen chloride, chlorine, bromine, aluminum

10.6 Hazardous decomposition products: None if substance is used properly.

11. TOXICOLOGICAL INFORMATION

11.1 Acute toxicity: The metal alloy has not been tested; the single components of the alloy are below the limits of acute toxicity even if a full resorption is assumed.

11.2 Effects at humans:

So far as the generally applicable regulations of industrial hygiene were adhered to, any harmful effect on the health has not become known.

After swallowing: Leaves the body on natural way.

After skin contact: With frequent skin contact skin defatting is possible.

After inhalation: Due to the very low steam pressure not applicably.

After eye contact: Splashes in the eyes may cause irritations.

12. ECOLOGICAL INFORMATION

12.1 Ecological toxicity: The product is not miscible with water and shows a tendency toward sedimentation. Quantitative data for the ecological effect of this product are not present.

12.2 Overall evaluation: In the case of appropriate handling and use no ecological problems are to be expected.

13. DISPOSAL CONSIDERATIONS

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

13.1 Disposal: Intended use or recycling is to be preferred to the disposal. The product should be disposed according to the locally valid laws on waste disposal and (the competent authorities are responsible to give the necessary information).

13.2 Additional references:

Cleaning agent: diluted, warmed up hydrochloric acid. Soap/water solution for surfaces.

14. TRANSPORT INFORMATION

UN Number: UN2803

UN Proper Shipping Name: Gallium

Transport Hazard Class: 8

Packing Group: III

Marine Pollutant: No

Special Precautions: Corrosive to metals, especially aluminum and aluminum alloys.

15. REGULATORY INFORMATION

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: Not applicable

National regulations as

Solvent Ordinance (31 BImSchV) : Not applicable

Water hazard class: not dangerous for water (self-assessment)

Chemical Safety Assessment

Not applicable

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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.

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