

Revision Date: 02/26/2025

According to Regulation (EC) No 1907/2006
Liquid Metal Thermal Compound

Version: 2.5

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product Identifier**

Name/Title : Liquid Metal Thermal Compound

Model: ML102

Other Descriptions:

Liquid Metal Thermal Paste

1.2 Details of the supplier of the safety data sheet

Company name: Meta Online LLC

Address: 3044 John Hancock Dr. Virginia Beach VA 23452

Telephone: +1 757 775 9423, +1 757 7759424

E-mail: info@metaonlinellc.com

Internet: https://www.metaonlinellc.com

1.3 Emergency Contact

Emergency Action: In the event of a medical enquiry involving this product, please contact your doctor or local hospital accident and emergency department or the NHS enquiry service.

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Regulation (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**Regulation (EC) No 1272/2008****GHS Classification (29 CFR 1910.1200):**

Corrosive to metals, category 1.

Signal word: Warning**Pictograms:****Warnings:**

H290 : May be corrosive to metals.

Precautionary statements

P102 : Keep out of 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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SECTION 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

SECTION 4: FIRST-AID MEASURES**4.1. Description of first aid measures****General information**

Remove patient from area of exposure

After inhalation

Remove to fresh air, keep warm and quiet, give oxygen if breathing is difficult. Seek immediate medical attention.

After contact with skin

Remove contaminated clothing, brush material off skin, wash affected area with soap and water. Seek medical attention if irritation develops or persists.

After contact with eyes

Flush eyes with lukewarm water, including under upper and lower eyelids, for at least 15 minutes. Seek medical attention if irritation develops or persists.

After ingestion

Rinse mouth with water. Do not induce vomiting. Seek medical attention. Never induce vomiting or give anything by mouth to an unconscious person

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

We are not aware of any special treatment required. Treat the symptoms

SECTION 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.

Additional information: None

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SECTION 6 ACCIDENTAL RELEASE MEASURES**6.1. Personal precautionary measures**

Slip hazard by run out or buried product.

6.2. Environmental precautions

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

SECTION 7 HANDLING AND STORAGE**7.1. Precautions for safe handling**

Accord with the putting and clicking of standard management of the storage. Avoid spillage. Prevent any unnecessary contact with other chemicals. Handling unpacked Conductionaut may alter its quality and degree of purity. Thermal Grizzly accepts no liability for changes or product quality resulting from processing the substance.

Conditions for safe storage, including any incompatibilities

Avoid High Temperature at place of storage. Not in glass containers, as with solidifying the liquid has an enlargement of the volume of around approx. 0,3%, which may cause an inner pressure within the glass. Plastics (PE, PP) are well suitable as container material.

Information on storage conditions

Do not store with oxidizing or acidic substances

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION**8.1. Control parameters**

Additional advice on limit values To date, no national critical limit values exist.

8.2. Monitoring exposure / personal protective equipment

Workplace limits in Germany: Ingredients with workplace-specific limits to be controlled:
not applicable

Personal protection:

TBD

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

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SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES**9.1. Information on basic physical and chemical properties**

Physical state:	Liquid Metal Alloy
Color:	Silver
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):	< 10(-8) torr at 500 °C
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:	0.03 Pas

9.2. Other information

None

SECTION 10 STABILITY AND REACTIVITY**10.1. Reactivity**

The product amalgamates with metals on the surface like copper, tin, lead, zinc, gold and silver jewelry, 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.

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.

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SECTION 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

SECTION 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.

SECTION 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.

SECTION 14 TRANSPORT INFORMATION

14.1 UN number: UN2803

14.2 UN proper shipping name: Gallium

14.3 Transport hazard class(es): 8

14.4 Packing group: III

14.5 Marina Pollutant: No

Special Precautions:

Corrosive to metals, especially aluminum and aluminum alloys.

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SECTION 15 REGULATORY INFORMATION**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: Not applicable

National regulations as

Solvent Ordinance (31 BImSchV) : Not applicable

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

15.2. Chemical safety assessment

Not applicable

SECTION 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.