



Safety Data Sheet (93/112/EC)

Mercury valid from: 01.01.2001

1. Identification of the substance/preparation and of the company/undertaking

Product information / Trade name

- MERCURY (metallic, in different grades of purity)

Information about manufacture / Supplier

- Company: GMR Gesellschaft für Metallrecycling mbH, Naumburger Straße 24, 04229 Leip.
 - Telephone / Fax: 03 41 – 4 01 25 12 / 03 41 – 4 01 12 95
 - Emergency infor.: 01 72 – 3 64 42 04
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2. Additional information / Chemical properties

Name of substance:	mercury	Index Letter:	T
Chemical formula:	Hg	S-phrases:	S 1 / 2 – 7 – 44
CAS-Nr.:	7439 – 97 – 6	EC-Index-No.:	080 – 001 – 00 – 0
Molecular weight:	200.59	EEC-No.:	231 – 106 – 7
R-phrases:	R23 – 33		

3. Hazards identification

Toxic by inhalation – danger of cumulative effects

4. First – aid measures

- General information:
Bring effected persons out of danger area – Remove contaminated or saturated clothing immediately and dispose of safely.
 - Following inhalation:
Bring effected person to the fresh air, ensure that she/he is comfortable, if necessary use respirator. Do not leave effected persons unattended. Consult doctor immediately.
 - Following contact with skin:
Rinse immediately with soap and plenty of water, - if there is continuous skin irritation, consult doctor.
 - Following eye contact:
Rinse with a lot clear water for a longer time, during the eye is opened – contact doctor if necessary
 - If substance has been swallowed:
If person is fully conscious, let drink a lot of water and let vomit, a gift of activ-coal (20-40g in 10% suspension) may be helpful – consult doctor immediately.
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5. Fire – fighting measures

- Produkt itself is not combustible
 - Suitable extinguishing substances: all extinguishing substances suitable
 - Particular danger caused by material, its combustion products or gases produced
 - The possibility of production of toxic mercury vapors, which were heavier than air – Toxic by inhalation!
 - Special protective equipment:
In the case of fire, wear respirator independent of surrounding air – use protective clothing and keep always upwind, avoid, that the mercury or the water comes into the drainage system.
Contaminated fire extinguishing water must be disposed of in accordance with the regulations issued by the appropriate local authorities.
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6. Accidental release measures

- Personal precautionary measures:
Wear personal protective equipment; see section 8.
Keep unprotected persons at a distance, avoid contact with the material
 - Measures for environmental protection:
Isolate and seal off defective containers immediately. Do not allow entrance in soil and stretches of water.
Cover over drainage system.
 - Procedure for cleaning / absorption:
Absorb mechanically with suitable device and collect in a suitable container. Dispose of absorbed material in accordance with the regulations. Clean contaminated areas thoroughly.
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7. Handling and storage

- Handling:
Container may only be opened by means of suction. Always close container tightly after removal of product. Ensure tightness at all times. Ensure suitable suction / aeration at the work place and with operational machinery. Continuously smooth floor.
 - Keep not allowed persons away
 - Use certificated containers only
 - Look for tighty floors ore use protection systems.
 - Storage:
Storage temperature: between 15°C and 25°C
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8. Exposure controls / personal protection equipment

Border values for industrial safety:

MAK values for mercury metallic or inorganic mercury compounds
0.01 ml/m³ or 0.1 mg/m³

BAT values for mercury metallice or inorganic mercury compounds
50 µg/l (Fullblood), 200 µg/l (urine)

Personal protective equipment

- Measures for general protection and hygiene:
All precautionary measures indicated have to be observed. No eating, drinking, smoking, or snuffing tobacco at work. Wash face and / or hands before break and end of work. If the limits at the workplace are exceeded and / or larger amounts are released (leakage, spilling, etc.) the indicated respiratory protection should be used. Avoid contact with skin, eyes, and clothing. Preventive skin protection recommended. If there is the possibility of skin /eye contact the indicated hand / eye / body protection should be used. Do not breathe vapour. Keep clothes separate.
 - Respiratory protective equipment:
If gas / fumes occur for short periods: Respirator with Hg filter, colour: red
 - Hand protection:
Protective gloves: rubber
 - Eye protection:
Safety goggles with side-shields
 - Body protection:
Chemical protective suit. During cleaning work: rubber or plastic boots. Wear rubber apron, plastic apron. Immediately change moistened and saturated work clothes.
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9. Physical and chemical properties

- Shape: liquid
- Colour: metallic
- Odour: odourless
- pH-Value: neutral
- Viscosity:
 - (at 20 C) 1.55 cP
 - (at 100 C) Method 1.24 cP
- Melting-point/range: - 38.9 °C
- Boiling-point/range: 357.3 °C
- Flashpoint: n.a.
- Ignition temperature: n.a.
- Explosion limits: n.a.
lower / upper
Method
- Vapour pressure:
 - (at 20 C) 0.16 Pa
 - (at 30 C) 0.37 Pa
- Density: 13.55 g/cm³
- Solubility:
Medium water (at 25 C) chemical insoluble, physical solved mercury exceeds limit!

10. Stability and reactivity

- Conditions to be avoided: extremely heat up
- Substances to be avoided: Acetylides, Ammonium, Amines, Alkaline-metals,
Non-ferrous metals, Halogens, conc. mineral acids, Carbides
Halogenoxids
- Dangerous products of decomposition: high toxic vapours
- Additional guidelines: Vapours are heavier than air.

11. Toxicological information

Informations about acute toxicity are not available

- Mercury is easily picked up by the skin – don't work without protection glove!

Subacute to chronic toxicity, when working for longer time about MAK-values

Experiences with human beings

- Irritates skin and mucous linings of the eyes and respiratory tract.
- If swallowed, there is a possible risk of irritation to gastro-intestinal tract.
- target organ: Poisoning has an effect on the central nervous system.
- Kidney damage possible. Always handle with care!

12. Ecological data

Data on elimination (persistence and degradability):

not biodegradable

Behaviour on environmental fields:

Bioaccumulation: high

Mobility: high

Eco-toxic effects

Aquatic toxicity

- Fish toxicity: high
- Acute fish toxicity: LC 50 (96h) = 0,16 mg/l, Cyprinus carpio, literature
- Acute toxicity to crustaceans: EC 50 (24h) = 5,34 mg/l, Artemia salina

Behaviour in water treatment plants

- Bacterial toxicity: high

Further directions

- Prevent penetration into soil, stretches of water and drainage systems.

13. Disposal considerations

Product

Must be recycled or disposed of as a waste requiring special control.

The responsible person to be contacted in this questions You can reach by GMR for Germany under Phon—No. **0172-3644204** or ++**49-341-4012512** (for EC).

Contaminated packaging

Do not reuse empty containers and dispose of in accordance with the regulations issued by the appropriate local authorities.

14. Transport information

Dangerous according to the transport regulations GGVS/GGVE/RID/ADR/IMDG

Surface transport ADR/RID/GGVS/GGVE

- ADR/RID-Classification: Class 8
 - Number and letter: C9
 - Name of product: UN-No. 2809 MERCURY
 - Danger label: 8
 - Listed good according to art. 7 GGVS: no
 - Listed good according to art. 7a GGVS: no
- Orange warning plate and accident data sheet necessary, if the transported amount exceeds 1000kg of gross weight.

Transport by vessel IMDG-Code / GGV See

IMDG/GGVSee-Class: 8 UN-Number: 2809 packaging group: III
Emergency action EmS: 8-12 Danger label: 8
Proper shipping name: MERCURY
Remarks: keep away from azids, living and recreation areas

Air transport ICAO-TI and IATA-DGR

ICAO/IATA-Class: 8 UN-Number: 2809 packaging group: III
Proper shipping name: MERCURY

15. Regulatory information

Labelling in accordance with EC-directive

- Index letter: T Toxic
- R-phrases: 23-33 Toxic by inhalation. Danger of cumulative effects.
- S-phrases: 1 / 2-7-45 Keep locked up and out of reach of children. Keep container tightly closed. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
- EC-labelling: 231-106-7

National german regulations

Additional classification according to regulations on dangerous substances

Information concerning employment restrictions

- Note employment restrictions for minors
- Note employment restrictions for pregnant and lactating woman
- Regulation concerning malfunctions: Appendix II; substance No. 258
- Technical instructions air; dust - like inorganic substances class I
- Water pollution class: 3, highly water-pollutive
Classification by commission for evaluating water pollutive substances (KBwS)
- Other regulations, restrictions and prohibiting stipulations:
Store under lock and key or in a way, that only skilled persons have access to it.

Other countries

- Observe the national regulations

16. Other informations

Stand vom: 31.12.2004

The data presented here correspond to the present state of our knowledge and experience and are intended to describe our product with respect to possible safety demands.

We imply with this however no guarantee of properties or description of qualities.
