

Safety data sheet

according to Regulation (EC) No. 1907/2006



Printing date 20.04.2012

Version number 1

Revision: 20.04.2012

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** MERCURY ICP-MS Standard Solution 100mg/l Hg
- **Article number:** 5017
- **Registration number**
A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.
- **Relevant identified uses of the substance or mixture and uses advised against**
- **Application of the substance / the preparation** Laboratory chemical
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Carl Roth GmbH + Co. KG
Schoemperlenstraße 3-5
76185 Karlsruhe
Germany
Telefon: +49/(0)721 5606-0 Telefax: +49/(0)721 5606-149 E-Mail: sicherheit@carlroth.de
- **Further information obtainable from:** Department Health, Safety and Environment
- **Emergency telephone number:** Poison Centre Munich Telefon +49/(0)89 19240

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
Met. Corr.1 H290 May be corrosive to metals.
Skin Corr. 1B H314 Causes severe skin burns and eye damage.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
C; Corrosive
R34: Causes burns.

- **Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS05

- **Signal word** Danger
- **Hazard-determining components of labelling:**
Nitric acid
- **Hazard statements**
H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
- **Precautionary statements**
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P234 Keep only in original container.
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

(Contd. on page 2)

Safety data sheet

according to Regulation (EC) No. 1907/2006



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Version number 1

Revision: 20.04.2012

Trade name: MERCURY ICP-MS Standard Solution 100mg/l Hg

(Contd. of page 1)

- P310 Immediately call a POISON CENTER or doctor/physician.
- **Other hazards**
All chemicals are potentially dangerous. They should only be handled by specially trained personnel.
 - **Results of PBT and vPvB assessment**
 - **PBT:** Not applicable.
 - **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Aqueous solution.

- **Dangerous components:**

CAS: 7697-37-2 EINECS: 231-714-2	Nitric acid C R35; O R8 Ox. Liq. 3, H272; Skin Corr. 1A, H314	>5- < 20%
CAS: 21908-53-2 EINECS: 244-654-7	mercury monoxide T+ R26/27/28; N R50/53 R33 Acute Tox. 2, H300; Acute Tox. 1, H310; Acute Tox. 2, H330; STOT RE 2, H373; Aquatic Acute 1, H400; Aquatic Chronic 1, H410	< 0.1%

- **Additional information:** For the wording of the listed risk phrases refer to section 16.

4 First aid measures

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:**
After inhalation of vapors:
Take affected persons into fresh air and keep quiet.
Seek medical treatment in case of complaints.
- **After skin contact:**
Immediately rinse with water.
If there is any trouble seek medical help.
- **After eye contact:**
Rinse immediately for 15 minutes with plenty of water with the eyelid held wide open. Seek medical advice.
- **After swallowing:**
Rinse out mouth and drink a glass of water. Do not induce vomiting.
Risk of perforation!
Call for a doctor immediately and show the container or label.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **Special hazards arising from the substance or mixture**
Product non-combustible.
Ambient fire may liberate hazardous vapours.
- **Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.

(Contd. on page 3)

Safety data sheet

according to Regulation (EC) No. 1907/2006



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Version number 1

Revision: 20.04.2012

Trade name: MERCURY ICP-MS Standard Solution 100mg/l Hg

(Contd. of page 2)

Wear fully protective suit.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**

Wear protective clothing.

Do not inhale vapours. Avoid contact with the eyes and skin.

- **Environmental precautions:** Do not allow to enter sewers/ground water or penetrate the soil.

- **Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (e.g. Rotisorb® Art.-Nr. 1710.1).

Dispose of the material collected according to regulations.

- **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.

7 Handling and storage

- **Handling:**

- **Precautions for safe handling**

Handle and open container with care.

Keep containers, equipment and working place clean.

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

- **Conditions for safe storage, including any incompatibilities**

- **Storage:**

- **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.

- **Information about storage in one common storage facility:** Store away from foodstuffs.

- **Further information about storage conditions:**

Keep container tightly sealed.

Store receptacle in a well ventilated area.

- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

- **Control parameters**

- **Ingredients with limit values that require monitoring at the workplace:**

7697-37-2 Nitric acid	
WEL (Great Britain)	Short-term value: 2.6 mg/m ³ , 1 ppm
IOELV (EU)	Short-term value: 2.6 mg/m ³ , 1 ppm

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

- **Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Immediately remove all soiled and contaminated clothing.

Avoid contact with the eyes and skin.

Wash hands before breaks and at the end of work.

- **Individual protection measures**

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

- **Respiratory protection:** When vapours/aerosols are generated.

(Contd. on page 4)

Trade name: MERCURY ICP-MS Standard Solution 100mg/l Hg

(Contd. of page 3)

· **Protection of hands:**

Check protective gloves prior to each use for their proper condition.



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

Nitrile rubber, NBR \geq 0.2 mm

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 protection:**



Tightly sealed goggles

· **Body protection:** Protective work clothing

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Fluid

Colour: Colourless

· **Odour:** Odourless

· **pH-value:** Not determined.

· **Change in condition**

Boiling point/Boiling range: Undetermined.

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:**

Decomposition temperature: Not determined.

· **Self-igniting:** Product is not self-igniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

Lower: Not determined.

Upper: Not determined.

· **Vapour pressure:** Not determined.

· **Density:** Not determined.

(Contd. on page 5)

Safety data sheet

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Revision: 20.04.2012

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(Contd. of page 4)

· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Fully miscible.
· Segregation coefficient (n-octanol/water):	Not determined.
· Viscosity: Dynamic:	Not determined.
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions** No information available.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:**
Oxidizable substances, organic solvents, metals, ammonia
Acids, alkalis.
- **Hazardous decomposition products:** No dangerous decomposition products known.
- **Additional information:** Corrosive effect.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **LD/LC50 values relevant for classification:** Quantitative data on the toxicity of this product are not available.
- **Primary irritant effect:**
- **on the skin:**
Danger through skin adsorption.
Caustic effect on skin and mucous membranes.
- **on the eye:** Strong caustic effect.
- **after inhalation:** Burns of the mucous membranes, coughing and dyspnoea.
- **Sensitization:** No sensitizing effects known.
- **Subacute to chronic toxicity:**
Neurotoxic effects
Damage of kidneys.
- **Additional toxicological information:**
Systemic effect drop in blood pressure, cardiac dysrhythmia, circulatory collapse, renal failure.
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.
- **Further information:** The product should be handled with the care usual when dealing with chemicals.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** Quantitative data on the ecological effect of this product are not available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.

(Contd. on page 6)

Safety data sheet

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Revision: 20.04.2012

Trade name: MERCURY ICP-MS Standard Solution 100mg/l Hg


(Contd. of page 5)

- **Additional ecological information:**
- **General notes:** Do not allow product to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
The disposal is regionally differently regulated, therefore the kind of disposal is to be inquired at the responsible authorities.
This material and its container must be disposed of as hazardous waste.
- **Uncleaned packaging:**
- **Recommendation:** Disposal according to official regulations.

14 Transport information

<ul style="list-style-type: none"> · UN-Number · ADR, IMDG, IATA 	UN2031
<ul style="list-style-type: none"> · UN proper shipping name · ADR · IMDG, IATA 	2031 NITRIC ACID NITRIC ACID
<ul style="list-style-type: none"> · Transport hazard class(es) · ADR, IMDG, IATA 	<div style="text-align: center;">  </div>
<ul style="list-style-type: none"> · Class · Label 	8 Corrosive substances. 8
<ul style="list-style-type: none"> · Packing group · ADR, IMDG, IATA 	II
<ul style="list-style-type: none"> · Environmental hazards: · Marine pollutant: 	No
<ul style="list-style-type: none"> · Special precautions for user · Danger code (Kemler): · EMS Number: 	Warning: Corrosive substances. 80 F-A,S-B
<ul style="list-style-type: none"> · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code 	Not applicable.
<ul style="list-style-type: none"> · Transport/Additional information: 	
<ul style="list-style-type: none"> · ADR · Limited quantities (LQ) · Tunnel restriction code 	1L E

(Contd. on page 7)

Safety data sheet

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Revision: 20.04.2012

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(Contd. of page 6)

· UN "Model Regulation":	UN2031, NITRIC ACID, 8, II
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15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **National regulations:**
- **Information about limitation of use:** Employment restrictions concerning juveniles must be observed.
- **Waterhazard class:** Water hazard class 2 (Self-assessment): hazardous for water.
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**

H272 May intensify fire; oxidiser.
 H300 Fatal if swallowed.
 H310 Fatal in contact with skin.
 H314 Causes severe skin burns and eye damage.
 H330 Fatal if inhaled.
 H373 May cause damage to organs through prolonged or repeated exposure.
 H400 Very toxic to aquatic life.
 H410 Very toxic to aquatic life with long lasting effects.

R26/27/28 Very toxic by inhalation, in contact with skin and if swallowed.

R33 Danger of cumulative effects.

R35 Causes severe burns.

R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R8 Contact with combustible material may cause fire.

- **Department issuing MSDS:** Department: Health, Safety and Environment

- **Contact:** Frau Weckemann

- **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

ADR: Accord européen sur le transport 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 Harmonized System of Classification and Labelling of Chemicals

- *** Data compared to the previous version altered.**