

Material Safety Data Sheet

According to 91/155 EEC

Printing date 19.09.2005

Reviewed on 16.09.2005

* 1 Identification of substance:

- **Product details:** Reagent for water analysis
- **Product name:** Iron LR
- **Catalog number:** 00515379, (4)515370, (4)515371, 515373(0)
- **Supplier:**
 Tintometer GmbH
 Schleefstraße 8a-12
 D - 44287 Dortmund
 Made in Germany
- **Informing department:** Department Laboratory
- **Emergency information:**
 Poison Center Berlin, Germany
 phone: +49(0)30 19240

phone: +49(0)231 94510-0

* 2 Composition/Data on components:

- **Description:** Mixture of the substances listed below with harmless additions.

- **Dangerous components:**

CAS: 124-04-9 EINECS: 204-673-3 EC Number: 607-144-00-9	adipic acid	<input checked="" type="checkbox"/> Xi; R 36	50-60%
CAS: 65208-41-5 EINECS: 249-881-5	calcium thioglycollate trihydrate	<input checked="" type="checkbox"/> Xn; R 22-37-43	0.1-1.0%

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

* 3 Hazards identification

- **Hazard designation:**



Xi Irritant

- **Information pertaining to particular dangers for man and environment**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

R 36 Irritating to eyes.

R 43 May cause sensitisation by skin contact.

- **Classification system**

The classification is in line with current EC lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies.

* 4 First aid measures

- **General information** Instantly remove any clothing soiled by the product.
- **After inhalation** Supply fresh air and call for doctor for safety reasons.
- **After skin contact** Instantly wash with water and soap and rinse thoroughly.

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- **After eye contact**
 - Rinse opened eye for several minutes under running water.
 - Call a doctor immediately.
 - **After swallowing**
 - Seek medical treatment.
 - Drink copious amounts of water, induce vomiting.
 - **The following symptoms may occur:**
 - after inhalation:
 - coughing
 - mucous membrane irritation
 - breathing difficulty
 - after swallowing:
 - irritation
 - cramps
 - sickness
 - vomiting
 - **Danger** risk of skin sensitization
-

* 5 Fire fighting measures

- **Suitable extinguishing agents** Use fire fighting measures that suit the environment.
 - **Special hazards caused by the material, its products of combustion or resulting gases:**
 - Formation of toxic gases is possible during heating or in case of fire.
 - Sulphur oxides (SO_x)
 - **Protective equipment:**
 - Wear self-contained breathing apparatus.
 - Wear full protective suit.
 - **Additional information**
 - Ambient fire may liberate hazardous vapours.
 - Collect contaminated fire fighting water separately. It must not enter drains.
 - Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
-

* 6 Accidental release measures

- **Person-related safety precautions:**
 - Ensure adequate ventilation
 - Wear protective equipment. Keep unprotected persons away.
 - **Measures for environmental protection:** Do not allow product to reach sewage system or water bodies.
 - **Measures for cleaning/collecting:**
 - Dispose of contaminated material as waste according to item 13.
 - Collect mechanically.
 - Ensure adequate ventilation.
-

* 7 Handling and storage

- **Handling**
 - **Information for safe handling:** No special measures required.
 - **Information about protection against explosions and fires:** No special measures required.
 - **Storage**
 - **Requirements to be met by storerooms and containers:**
 - Store in cool location.
 - Unsuitable material for container: steel.
 - **Information about storage in one common storage facility:** Not required.
 - **Further information about storage conditions:**
 - Keep container tightly sealed.
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- Protect from heat and direct sunlight.
 - Store under dry conditions.
 - Protect from humidity and keep away from water.
 - Protect from the effects of light.
 - **Storage class** Not required.
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* 8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
 - **Components with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
 - **Additional information:** The lists that were valid during the compilation were used as basis.
 - **Personal protective equipment**
 - **General protective and hygienic measures**
Keep away from foodstuffs, beverages and food.
Take off immediately all contaminated clothing
Wash hands during breaks and at the end of the work.
Avoid contact with the eyes and skin.
Do not eat, drink or smoke while working.
 - **Breathing equipment:** Use breathing protection against the effects of fumes/dust/aerosol.
 - **Recommended filter device for short term use:** Filter P2
 - **Protection of hands:**
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Preventive skin protection by use of skin-protecting agents is recommended.
After use of gloves apply skin-cleaning agents and skin cosmetics.
 - **Material of gloves**
nitrile
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.
Recommended thickness of the material: ≥ 0.11 mm
 - **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.
Value for the permeation: Level ≥ 6 (480 min)
 - **Eye protection:** Tightly sealed safety glasses.
 - **Body protection:** Protective work clothing.
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* 9 Physical and chemical properties:

· Form:	Tablets
· Colour:	Yellow
· Odour:	Strong
· Melting point/Melting range:	Not determined
· Boiling point/Boiling range:	265°C
· Flash point:	> 100°C
· Danger of explosion:	Product is not explosive.
· Density	Not determined
· Solubility in / Miscibility with Water:	Soluble
· pH-value (9.9 g/l) at 20°C:	3.3

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· Solvent content:	
Organic solvents:	0.0 %
· Solids content:	100.0 %

* 10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** To avoid thermal decomposition do not overheat.
- **Materials to be avoided:**
 - alkalis
 - oxidizing agents
- **Dangerous reactions**
 - Reacts with reducing agents
 - Reacts with strong oxidizing agents
- **Dangerous products of decomposition:**
 - hydrogen sulphide
 - see chapter 5

* 11 Toxicological information

- **Acute toxicity:** Quantitative data on the toxicity of the preparation are not available.

· LD/LC50 values that are relevant for classification:		
124-04-9 adipic acid		
Oral	LD50	5700 mg/kg (rat)
65208-41-5 calcium thioglycollate trihydrate		
Oral	LD50	352 mg/kg (rat)

- **Primary irritant effect:**
 - **on the skin:** Irritant to skin and mucous membranes.
 - **on the eye:** Irritant effect.
- **Sensitization:** Sensitization possible by skin contact.
- **Subacute to chronic toxicity:**
 - CAS-No. 10043-35-3:
 - MERCK: Sensitization test (guinea pig): negative (OECD 406)
- **Additional toxicological information:**
 - The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:
 - Irritant

* 12 Ecological information:

- **Information about elimination (persistence and degradability):**
- **Other information:**
 - Quantitative data on the ecological effect of this product are not available.
 - CAS-No. 124-04-9: 100% / 28 d

· Behaviour in environmental systems:	
124-04-9 adipic acid	
log P(o/w)	0.093 (25°C) (.)
10043-35-3 boric acid, crude natural, containing not more than 85 per cent of H3BO3 calculated on the dry weight	
log P(o/w)	0.76 (25°C) (.)

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· **Ecotoxicological effects:**· **Aquatic toxicity:****124-04-9 adipic acid**

EC50	86 mg/l/48h (Daphnia magna)
LC50	511 mg/l/48h (Leuciscus idus)
	97 mg/l/96h (Pimephales promelas)

10043-35-3 boric acid, crude natural, containing not more than 85 per cent of H3BO3 calculated on the dry weight

EC50	133 mg/l/48h (Daphnia magna)
LC50	5600 mg/l/96h (Gambusia affinis)

· **Remark:** Forms corrosive mixtures with water even if diluted.· **Additional ecological information:**· **BSB5-value:****124-04-9 adipic acid**

BSB5	0.598 g/g (-)
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· **General notes:**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.

Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.

Must not reach sewage water or drainage ditch undiluted or unneutralized.

* **13 Disposal considerations**· **Product:**· **Recommendation** Must not be disposed of together with household garbage. Do not allow product to reach sewage system.· **European waste catalogue**

16 05 06	laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals
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· **Uncleaned packagings:**· **Recommendation:** Disposal must be made according to official regulations.· **Recommended cleaning agent:** Water, if necessary with cleaning agent.* **14 Transport information**· **Land transport ADR/RID (cross-border)**· **ADR/RID-GGVS/E Class:** -· **Maritime transport IMDG:**· **IMDG Class:** -· **Marine pollutant:** No· **Air transport ICAO-TI and IATA-DGR:**· **ICAO/IATA Class:** -· **Transport/Additional information:** Not dangerous according to the above specifications.* **15 Regulatory information**· **Designation according to EC guidelines:**

The product has been classified and labelled in accordance with EC Directives / Ordinance on Hazardous Materials (GefStoffV)

· **Code letter and hazard designation of product:**

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· Hazard-determining components of labelling:

calcium thioglycollate trihydrate

· Risk phrases:

36 Irritating to eyes.

43 May cause sensitisation by skin contact.

· Safety phrases:

24 Avoid contact with skin.

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

37 Wear suitable gloves.

60 This material and its container must be disposed of as hazardous waste.

16 Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Relevant R-phrases

22 Harmful if swallowed.

36 Irritating to eyes.

37 Irritating to respiratory system.

43 May cause sensitisation by skin contact.

· Department issuing data specification sheet: Technical Department**· * Data compared to the previous version altered.**

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