

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

Product identifier	
Trade name	<u>Iron(III) citrate hydrate</u>
Stock number:	A10276
CAS Number:	334024-15-6
EINECS Number:	222-536-6
Relevant identified uses of the substance or mixture and uses advised against	SU24 Scientific research and development
Sector of Use	
Details of the supplier of the safety data sheet	
Manufacturer/Supplier:	Alfa Aesar GmbH & Co.KG A Johnson Matthey Company Benzstrasse 3 D-76185 Karlsruhe / Germany Tel: +49 (0) 721 84007 280 Fax: +49 (0) 721 84007 300 Email: tech@alfa.com www.alfa.com
Informing department:	Product safety department.
Emergency telephone number:	Product Safety Department +049 (0) 7275 988687-0 (business hours) Carechem 24: +44 (0) 1235 239 670 (Multi-language 24 hour emergency) Giftnotruf Universität Mainz / Poison Information Center Mainz www.giftinfo.uni-mainz.de Telefon:+49(0)6131/19240

2 Hazards identification

Classification of the substance or mixture	
Classification according to Regulation (EC) No 1272/2008	The substance is not classified according to the CLP regulation.
Classification according to Directive 67/548/EEC or Directive 1999/45/EC	Not applicable
Information concerning particular hazards for human and environment:	Not applicable
Label elements	
Labelling according to Regulation (EC) No 1272/2008	Not applicable
Hazard pictograms	Not applicable
Signal word	Not applicable
Hazard statements	Not applicable
Other hazards	
Results of PBT and vPvB assessment	
PBT:	Not applicable.
vPvB:	Not applicable.

3 Composition/information on ingredients

Chemical characterization: Substances (CAS#) Designation:	334024-15-6 Iron(III) citrate hydrate
Identification number(s):	
EINECS Number:	222-536-6

4 First aid measures

Description of first aid measures	
After inhalation	Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
After skin contact	Seek immediate medical advice. Instantly wash with water and soap and rinse thoroughly.
After eye contact	Seek immediate medical advice.
After swallowing	Rinse opened eye for several minutes under running water. Then consult doctor.
Information for doctor	Seek medical treatment.
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	CO ₂ , extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.
Special hazards arising from the substance or mixture	Can be released in case of fire: Carbon monoxide and carbon dioxide Metal oxide
Advice for firefighters	
Protective equipment:	Wear self-contained breathing apparatus. Wear full protective suit.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures	Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation
Environmental precautions:	Do not allow material to be released to the environment without proper governmental permits.
Methods and material for containment and cleaning up:	Collect mechanically.
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 information on disposal.

7 Handling and storage

Handling	
Precautions for safe handling	Keep containers tightly sealed. Store in cool, dry place in tightly closed containers.
Information about protection against explosions and fires:	Use explosion-proof apparatus / fittings and spark-proof tools.

Trade name **Iron(III) citrate hydrate**

(Contd. of page 1)

Conditions for safe storage, including any incompatibilities

Storage Requirements to be met by storerooms and containers: No special requirements.

Information about storage in one common storage facility: Store in the dark.
Store away from oxidizing agents.

Further information about storage conditions: Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.
Protect from the effects of light.

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

8 Exposure controls/personal protection

Additional information about design of technical systems: Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Control parameters Components with critical values that require monitoring at the workplace: Not required.

Additional information: No data

Exposure controls Personal protective equipment General protective and hygienic measures The usual precautionary measures should be adhered to in handling the chemicals.
Keep away from foodstuffs, beverages and food.
Instantly remove any soiled and impregnated garments.
Wash hands during breaks and at the end of the work.

Breathing equipment: Use breathing protection with high concentrations.

Protection of hands: Check protective gloves prior to each use for their proper condition.

Material of gloves 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.
Impervious gloves

Penetration time of glove material Not determined

Eye protection: Safety glasses

Body protection: Protective work clothing.

9 Physical and chemical properties**Information on basic physical and chemical properties**

General Information

Appearance:

Form: Powder

Colour: Orange
Brown

Smell: Not determined

Odour threshold: Not determined.

pH-value: Not applicable.

Change in condition

Melting point/Melting range: Not determined

Boiling point/Boiling range: Not determined

Sublimation temperature / start: Not determined

Inflammability (solid, gaseous) Not determined.

Ignition temperature: Not determined

Decomposition temperature: Not determined

Self-inflammability: Not determined.

Danger of explosion: Product is not explosive.

Critical values for explosion:

Lower: Not determined

Upper: Not determined

Steam pressure: Not applicable.

Density Not determined

Relative density Not determined.

Vapour density Not applicable.

Evaporation rate Not applicable.

Segregation coefficient (n-octanol/water): Not determined.

Viscosity:

dynamic: Not applicable.

kinematic: Not applicable.

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 dangerous reactions known

Incompatible materials: Light
Oxidizing agents

Hazardous decomposition products: Carbon monoxide and carbon dioxide
Metal oxide

11 Toxicological information

Information on toxicological effects

Acute toxicity:

Primary irritant effect:

on the skin: May cause irritation

on the eye: May cause irritation

Sensitization: No sensitizing effect known.

(Contd. on page 3)

Safety data sheet
according to 1907/2006/EC, Article 31

Revision: 10.06.2011

Printing date 13.06.2011

Trade name **Iron(III) citrate hydrate****Additional toxicological information:**

(Contd. of page 2)

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

12 Ecological information

Toxicity
Aquatic toxicity: No further relevant information 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.
Additional ecological information:
General notes: Water hazard class 1 (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.
Do not allow material to be released to the environment without proper governmental permits.

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 Hand over to disposers of hazardous waste.
Must be specially treated under adherence to official regulations.
Consult state, local or national regulations for proper disposal.

Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.

14 Transport information

Land transport ADR/RID and GGVS/GGVE (cross-border/domestic)
ADR/RID-GGVS/E Class: None

Maritime transport IMDG/GGVSea:
IMDG/GGVSea Class: None
Marine pollutant: No

Air transport ICAO-TI and IATA-DGR:
ICAO/IATA Class: None

Special precautions for user Not applicable.
Transport/Additional information: Not dangerous according to the above specifications.
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.

15 Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture
Labelling according to Regulation (EC) No 1272/2008 Not applicable
Hazard pictograms Not applicable
Signal word Not applicable
Hazard statements Not applicable

National regulations

Information about limitation of use: For use only by technically qualified individuals.

Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.
Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing data specification sheet: Health, Safety and Environmental Department.

Contact: Zachariah C. Holt
Global EHS Manager

Abbreviations and acronyms: ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
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)
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)