

Safety Data Sheet

according to Regulation (EC) No 1907/2006

854-99 FerroVer Iron Reagent

Revision date: 29.06.2021

Product code: 85499

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

854-99 FerroVer Iron Reagent

UFI: 77Q7-4AET-200D-S2CM

1.2. Relevant identified uses of the substance or mixture and uses advised against**Use of the substance/mixture**

Water analysis

1.3. Details of the supplier of the safety data sheet

Company name: HACH LANGE GmbH
Street: Willstätterstr. 11
Place: D-40549 Düsseldorf
Telephone: +49 (0)211 5288-383
e-mail: SDS@hach.com
Internet: www.de.hach.com
Responsible Department: HACH LANGE Ltd.
5, Pacific Way
Salford Manchester M50 1DL - United Kingdom
Tel. +44 (0) 161 872 1487 * Fax +44 (0) 161 848 7324
e-Mail: info-uk@hach.com

HACH LANGE Ltd.
Unit 1, Chestnut Road Western Industrial Estate
IRL-Dublin 12
Tel. +353 (0)1 4602522
e-Mail: info-ie@hach.com

1.4. Emergency telephone number:

Poison Control Center Mainz: Tel: +49 (0) 6131 19240 - 24 hour emergency service -

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

Hazard categories:

Acute toxicity: Acute Tox. 4

Skin corrosion/irritation: Skin Irrit. 2

Serious eye damage/eye irritation: Eye Dam. 1

Respiratory or skin sensitisation: Resp. Sens. 1

Specific target organ toxicity - single exposure: STOT SE 3

Hazardous to the aquatic environment: Aquatic Chronic 3

Hazard Statements:

Harmful if swallowed.

Causes skin irritation.

Causes serious eye damage.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause respiratory irritation.

Harmful to aquatic life with long lasting effects.

2.2. Label elements**Regulation (EC) No. 1272/2008**

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Hazard components for labelling

Sodium thiosulfate
sodium metabisulphite
sodium dithionite; sodium hydrosulphite
1,10-Phenanthroline-p-Toluolsulfonacid salt

Signal word: Danger

Pictograms:



Hazard statements

H302 Harmful if swallowed.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 Wash hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/doctor.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

Additional advice on labelling

The product is classified as dangerous in accordance with Regulation (EC) No. 1272/2008.

2.3. Other hazards

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).

SECTION 3: Composition/information on ingredients

3.2. Mixtures

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Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
7772-98-7	Sodium thiosulfate			45-55 %
	231-867-5			
	Skin Irrit. 2, Eye Irrit. 2, STOT SE 3; H315 H319 H335			
7681-57-4	sodium metabisulphite			20-30 %
	231-673-0	016-063-00-2	01-2119531326-45	
	Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, Resp. Sens. 1, STOT SE 3, Aquatic Chronic 3; H302 H315 H318 H334 H335 H412 EUH031			
7775-14-6	sodium dithionite; sodium hydrosulphite			15-25 %
	231-890-0	016-028-00-1		
	Self-heat. 1, Acute Tox. 4; H251 H302 EUH031			
68-04-2	tri-Sodium citrate			1-10 %
	200-675-3			
92798-16-8	1,10-Phenanthroline-p-Toluolsulfonacid salt			1-5 %
	Acute Tox. 3, Skin Irrit. 2, Eye Irrit. 2; H301 H315 H319			

Full text of H and EUH statements: see section 16.

SECTION 4: First aid measures
4.1. Description of first aid measures
General information

Take off all contaminated clothing immediately.

After inhalation

Move to fresh air. Consult a physician. Show this safety data sheet to the doctor in attendance.

After contact with skin

Wash off with soap and water. Take off all contaminated clothing immediately.

If symptoms persist, call a physician.

After contact with eyes

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

After ingestion

Drink 1 or 2 glasses of water. Prevent vomiting if possible. Call a physician immediately. Show this safety data sheet to the doctor in attendance.

4.2. Most important symptoms and effects, both acute and delayed

Irritation and corrosion

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

Treat symptomatically.

SECTION 5: Firefighting measures
5.1. Extinguishing media
Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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Unsuitable extinguishing media

None known.

5.2. Special hazards arising from the substance or mixture

Fire may liberate hazardous vapours.

The following may develop in event of fire: sulfur oxides., Sodium oxides, Carbon monoxide, Carbon dioxide (CO₂)

5.3. Advice for firefighters

In the event of fire, wear self-contained breathing apparatus.

Additional information

Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. For personal protection see section 8.

6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system.

6.3. Methods and material for containment and cleaning up

Sweep up or vacuum up spillage and collect in suitable container for disposal.

6.4. Reference to other sections

13. Disposal considerations

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Avoid contact with skin and eyes. Use only in well-ventilated areas. Do not breathe vapours/dust.

Advice on protection against fire and explosion

See also section 5

Further information on handling

Observe label precautions.

Avoid contact with skin, eyes and clothing.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Store at room temperature in the original container. Protect from light, moisture and damage.

Hints on joint storage

Do not store near acids.

Further information on storage conditions

Store between 5 and 25 °C in a dry, well ventilated place away from sources of heat, ignition and direct sunlight.

7.3. Specific end use(s)

Laboratory chemicals

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
7681-57-4	Disodium disulphite	-	5		TWA (8 h)	WEL

Additional advice on limit values

None known.

8.2. Exposure controls

Appropriate engineering controls

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

Protective and hygiene measures

The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Wash hands before breaks and after work.

General industrial hygiene practice.

Eye/face protection

Safety glasses with side-shields

Hand protection

Use barrier skin cream.

Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN 374.

In full contact: Gloves material: Viton, Layer thickness: 0.70 mm, Breakthrough time: >480 min. In splash contact: Glove material: nitrile rubber, Layer thickness 0,20 mm, Breakthrough time: > 30 min

Skin protection

Avoid contact with skin, eyes and clothing.

Respiratory protection

Breathing apparatus only if aerosol or dust is formed.

Recommended Filter type: ABEK-filter

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	crystalline
Colour:	white, light yellow
Odour:	sulphurous
pH-Value (at 20 °C):	5,29 (5 % solution)

Changes in the physical state

Melting point:	not applicable
Initial boiling point and boiling range:	not applicable
Sublimation point:	not applicable
Softening point:	not applicable
Pour point:	not applicable
Flash point:	not applicable

Flammability

Solid:	no data available
Gas:	no data available

Explosive properties

no data available

Lower explosion limits:	not applicable
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Upper explosion limits:	not applicable
Ignition temperature:	no data available
Auto-ignition temperature	
Solid:	no data available
Gas:	no data available
Decomposition temperature:	192 °C
Oxidizing properties	
no data available	
Vapour pressure:	no data available
Density (at 20 °C):	2,27 g/cm ³
Bulk density:	no data available
Water solubility: (at 20 °C)	soluble
Solubility in other solvents	
no data available	
Partition coefficient:	no data available
Viscosity / dynamic:	no data available
Viscosity / kinematic:	no data available
Flow time:	no data available
Vapour density:	no data available
Evaporation rate:	no data available
Solvent separation test:	no data available
Solvent content:	no data available
9.2. Other information	
Solid content:	no data available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reaction known under conditions of normal use.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Reacts with the following substances: Organic materials, Oxidizing agents, Acids, Aluminium, Sodium nitrite

10.4. Conditions to avoid

Product is sensitive to light and moisture.

10.5. Incompatible materials

Organic materials, Oxidizing agents, Acids

10.6. Hazardous decomposition products

Carbon monoxide, Carbon dioxide (CO₂), Sulphur oxides

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicokinetics, metabolism and distribution

No toxicology information is available.

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Acute toxicity

Harmful if swallowed.

ATEmix calculated

ATE (oral) 1491,2 mg/kg

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
7772-98-7	Sodium thiosulfate				
	oral	LD50 >5000 mg/kg	rat	RTECS	
7681-57-4	sodium metabisulphite				
	oral	LD50 1131 mg/kg	Rat		
	dermal	LD50 >2000 mg/kg	Rat	RTECS	
	inhalation (4 h) aerosol	LC50 >5,5 mg/l	Rat	RTECS	
7775-14-6	sodium dithionite; sodium hydrosulphite				
	oral	ATE 500 mg/kg			
92798-16-8	1,10-Phenanthroline-p-Toluolsulfonacid salt				
	oral	LD50 245,6 mg/kg	rat		

Irritation and corrosivity

H318 - Causes serious eye damage.

May cause skin irritation.

Sensitising effects

May cause sensitisation by inhalation.

Carcinogenic/mutagenic/toxic effects for reproduction

Contains no ingredient listed as a carcinogen

STOT-single exposure

The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

STOT-repeated exposure

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard

No aspiration toxicity classification

Specific effects in experiment on an animal

No data is available on the product itself.

Further information

Other dangerous properties can not be excluded. Handle in accordance with good industrial hygiene and safety practice.

SECTION 12: Ecological information
12.1. Toxicity

No data is available on the product itself. Do not let product enter drains.

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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
7772-98-7	Sodium thiosulfate					
	Acute fish toxicity	LC50 mg/l	24000	96 h	Gambusia affinis (Mosquito fish)	IUCLID
7681-57-4	sodium metabisulphite					
	Acute fish toxicity	LC50	32 mg/l	96 h	Lepomis macrochirus (Bluegill sunfish)	OECD
	Acute crustacea toxicity	EC50	89 mg/l	48 h	Daphnia magna (Water flea)	OECD

12.2. Persistence and degradability

No data is available on the product itself.

12.3. Bioaccumulative potential

No data is available on the product itself.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
7772-98-7	Sodium thiosulfate	-4,35

12.4. Mobility in soil

no data available

12.5. Results of PBT and vPvB assessment

no data available

12.6. Other adverse effects

no data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

In accordance with local and national regulations.

List of Wastes Code - residues/unused products

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste

List of Wastes Code - used product

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste

SECTION 14: Transport information

Land transport (ADR/RID)

Other applicable information (land transport)

Not subject to transport regulations.

Inland waterways transport (ADN)

Other applicable information (inland waterways transport)

Not tested

Marine transport (IMDG)

Other applicable information (marine transport)

Not subject to transport regulations.

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Air transport (ICAO-TI/IATA-DGR)

Other applicable information (air transport)

Not subject to transport regulations.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

no data available

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not relevant

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulatory information

Water hazard class (D): 2 - obviously hazardous to water

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Changes

Safety datasheet sections which have been updated: 2, 5, 6, 7

Revision: 29.06.2021

Safety datasheet sections which have been updated: 11

Revision: 05.10.2020

Safety datasheet sections which have been updated: 2, 11, 15, 16

Revision: 25.06.2020

Safety datasheet sections which have been updated: 2, 3

Revision: 16.03.2017

Safety datasheet sections which have been updated: 2, 3

Revision: 11.01.2016

Safety datasheet sections which have been updated: 2, 4, 11

Revision: 20.04.2015

Safety datasheet sections which have been updated: 2, 4, 6, 7-12, 14, 15

Revision: 14.10.2014

Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]

Classification	Classification procedure
Acute Tox. 4; H302	Calculation method
Skin Irrit. 2; H315	Calculation method
Eye Dam. 1; H318	Calculation method
Resp. Sens. 1; H334	Calculation method
STOT SE 3; H335	Calculation method
Aquatic Chronic 3; H412	Calculation method

Relevant H and EUH statements (number and full text)

H251	Self-heating: may catch fire.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.

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H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H412	Harmful to aquatic life with long lasting effects.
EUH031	Contact with acids liberates toxic gas.

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)