

Fe-EDDHSA 3%

SDS = Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

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

1.1. Product identifier

Product form : Solution (UVCB)
Trade name : Fe-EDDHSA 3%
IUPAC name : Acetic acid, oxo-, potassium salt, reaction products with ethylenediamine and para-hydroxybenzenesulfonic acid potassium salt, iron potassium salts
EC no : 462-490-6
REACH registration No : 01-0000019539-58
Product code : 100.100.130

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

1.2.1. Relevant identified uses

Main use category : Industrial use, Professional use
Use of the substance/mixture : Use as feedstock for fertilizer solutions in agriculture and horticulture
Function or use category : Fertilisers

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Biron B.V.
Houtwijk 28
8251 GD Dronten - The Netherlands
T +31 (0)321 336 730 - F +31 (0)0321 337 802
Algemeen@biron.nl - www.biron.nl

1.4. Emergency telephone number

Emergency number : National Poisons Information Service
+44 870 600 6266
worldwide: <http://www.who.int/ipcs/poisons/centre/directory/en>

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

2.2. Label elements

Not classified as dangerous according to the criteria of Regulation (EC) No 1272/2008.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Substance type : UVCB
Name : Iron complex of EDDHAS, potassium salt
EC no : 462-490-6

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Iron complex of EDDHAS, potassium salt	(EC no) 462-490-6 (REACH-no) 01-0000019539-58	0 - 100	Not classified

Full text of H-phrases: see section 16

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

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First-aid measures general	: Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.
First-aid measures after inhalation	: Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.
First-aid measures after skin contact	: Rinse with water. Soap may be used. Take off contaminated clothing. Take victim to a doctor if irritation persists.
First-aid measures after eye contact	: Rinse immediately with plenty of water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Take victim to an ophthalmologist if irritation persists.
First-aid measures after ingestion	: Give water to drink if victim completely conscious/alert. Do NOT induce vomiting. Immediately consult a doctor/medical service.

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

Symptoms/injuries after inhalation	: Slight irritation. EXPOSURE TO HIGH CONCENTRATIONS: Irritation of the respiratory tract. Dry/sore throat. Coughing. Respiratory difficulties.
Symptoms/injuries after skin contact	: Slight irritation. Red skin.
Symptoms/injuries after eye contact	: Redness of the eye tissue. Slight irritation. Visual disturbances.
Symptoms/injuries after ingestion	: Nausea. Vomiting.
Chronic symptoms	: ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Dry skin. Skin rash/inflammation.

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	: Water spray. Dry powder. Foam. carbon dioxide (CO ₂).
Unsuitable extinguishing media	: high volume water jet.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: No fire hazard.
Explosion hazard	: No direct explosion hazard.
Hazardous decomposition products in case of fire	: Carbon monoxide. Carbon dioxide. Nitrogen oxides. Sulphur oxides.

5.3. Advice for firefighters

Precautionary measures fire	: Exposure to fire/heat: have neighbourhood close doors and windows. Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation.
Firefighting instructions	: Dilute toxic gases with water spray.
Protection during firefighting	: Clothing for fire fighters (including helmets, protective boots and gloves) according to European Regulation EN 469, give a basic protection level for an incident with chemicals. Fire fighters have to wear suited clothing and an independent repertory device (SCBA) that covers the face completely with pressure. Heat/fire exposure: compressed air/oxygen apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Provide adequate ventilation. Do not get in eyes, on skin, or on clothing. Keep away from naked flames/heat.
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6.1.1. For non-emergency personnel

Protective equipment	: Concerning personal protective equipment to use, see section 8.
Emergency procedures	: Mark the danger area. No naked flames. Keep containers closed. Wash contaminated clothes. In case of hazardous reactions: keep upwind. In case of reactivity hazard: consider evacuation.

6.1.2. For emergency responders

Protective equipment	: Concerning personal protective equipment to use, see section 8.
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6.2. Environmental precautions

Stop the leak. Turn leaking containers leak-side up to prevent the escape of liquid. Prevent spreading in sewers.

6.3. Methods and material for containment and cleaning up

For containment	: Clean spills promptly. Sweep spilled substance into containers; if appropriate, moisten first to prevent dusting. Take up liquid spill into absorbent material, e.g.: sand.
Methods for cleaning up	: Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.
Other information	: Dispose of contaminated material at an authorized site.

6.4. Reference to other sections

See section 1 for emergency contact information. For further information refer to section 8: "Exposure controls/personal protection". For further information refer to section 13.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure adequate air ventilation. Do not get in eyes, on skin, or on clothing. Wear suitable protective clothing, gloves and eye/face protection. For further information refer to section 8: "Exposure controls/personal protection".

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Contaminated work clothing should not be allowed out of the workplace. Facilities: shower, eye shower. Do not discharge the waste into the drain.

7.2. Conditions for safe storage, including any incompatibilities

Incompatible materials : acids, hydrocarbons, metals, (aluminium, copper, zinc, light and alkaline metal s, copper alloys...).

Storage temperature : $\geq 5^{\circ}\text{C}$

Prohibitions on mixed storage : KEEP SUBSTANCE AWAY FROM: oxidizing agents. Light metals.

Special rules on packaging : Meets the legal requirements. correctly labelled. closing.

7.3. Specific end use(s)

Use as feedstock for fertilizer solutions in agriculture and horticulture.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Appropriate engineering controls : Facilities: shower, eye shower.

Personal protective equipment : Protective clothing. Safety glasses. Gloves.

Hand protection : Gloves

Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Disposable gloves	Latex, Nitrile rubber	6 (> 480 minutes)	0,11		EN 374

Eye protection : Eye protection

Type	Use	Characteristics	Standard
Safety glasses			EN 166

Skin and body protection : Wear suitable protective clothing

Respiratory protection : Mist formation:

Device	Filter type	Condition	Standard
Aerosol mask	Type P2		



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Appearance : liquid.

Colour : red. brown.

Odour : Slight odor.

Odour threshold : No data available

pH : $\pm 6 - 7$

Relative evaporation rate (butylacetate=1) : No data available

Melting point : No data available

Freezing point : $< 0^{\circ}\text{C}$

Boiling point : 100°C

Flash point : $> 100^{\circ}\text{C}$

Auto-ignition temperature : No data available

Decomposition temperature : $> 150^{\circ}\text{C}$

Flammability (solid, gas) : No data available

Vapour pressure : No data available

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Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 1.28 kg/l
Solubility	: Miscible with water. Water: 75 g/l
Log Pow	: -4
Viscosity, kinematic	: No data available
Viscosity, dynamic	: < 100 mPa.s
Explosive properties	: Product is not explosive.
Oxidising properties	: Not oxidizing.
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under use and storage conditions as recommended in section 7.

10.2. Chemical stability

Stable under use and storage conditions as recommended in section 7.

10.3. Possibility of hazardous reactions

Stable under use and storage conditions as recommended in section 7.

10.4. Conditions to avoid

Avoid high temperatures.

10.5. Incompatible materials

KEEP SUBSTANCE AWAY FROM: Light metals.

10.6. Hazardous decomposition products

No decomposition if stored normally.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

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LD50 oral rat	> 2000 mg/kg OECD 423
LD50 dermal rat	> 2000 mg/kg OECD 402
LC50 inhalation rat (mg/l)	> 4200 mg/m ³ OECD 403

Skin corrosion/irritation : Not classified (Based on available data, the classification criteria are not met)
pH: ± 6 - 7

Serious eye damage/irritation : Not classified (Based on available data, the classification criteria are not met)
pH: ± 6 - 7

Respiratory or skin sensitisation : Not classified (Based on available data, the classification criteria are not met)

Germ cell mutagenicity : Not classified (Based on available data, the classification criteria are not met)

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

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Viscosity, kinematic	78.12500000 mm ² /s

SECTION 12: Ecological information

12.1. Toxicity

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LC50 fish 1	> 100 mg/l 96 h - Species: Oncorhynchus mykiss (rainbow trout) - Method: OECD 203
EC50 Daphnia 1	> 100 mg/l 48 h - Species: Daphnia magna (Big water flea) - Method: OECD 202

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12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

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Log Pow	-4

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

- Regional legislation (waste) : Dispose of contaminated materials in accordance with current regulations.
Sewage disposal recommendations : Remove waste in accordance with local and/or national regulations.

SECTION 14: Transport information

Not regulated for transport

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

Fe-EDDHSA 3% is not on the REACH Candidate List

15.1.2. National regulations

Germany

- VwVwS Annex reference : Water hazard class (WGK) 1, low hazard to waters
12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

- SZW-lijst van kankerverwekkende stoffen : The substance is not listed
SZW-lijst van mutagene stoffen : The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes:

Complete review of safety data sheet.

Abbreviations and acronyms:

CLP	CLP = Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
SDS	SDS = Safety Data Sheet
REACH	REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
LC50	Median lethal concentration
LD50	Median lethal dose

Data sources : BIG-database.ECHA Website: Information on Registered Substances.Handbook of Chemistry and Physics, CRC Press Inc. Information from the suppliers ..

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Other information

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SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product