

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

### 1.1. Product identifier

Product form	: Substance
Substance name	: Fe-DTPA 6%
IUPAC name	: iron(3+) ino diammonium 2-[bis((2-[bis(carboxylatonethyl)amino] ethyl))amino]acetate
EC no	: 289-064-0
CAS No	: 85959-68-8
REACH registration No	: 01-2119980791-27
Product code	: 100.100.125
Formula	: C14H26N5O10Fe
Product group	: Solution

### 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	: Fertilizer: raw material
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)321 337 802  
[Algemeen@biron.nl](mailto:Algemeen@biron.nl) - [www.biron.nl](http://www.biron.nl)

### 1.4. Emergency telephone number

Emergency number	: National Poisons Information Service +44 870 600 6266 worldwide: <a href="http://www.who.int/ipcs/poisons/centre/directory/en">http://www.who.int/ipcs/poisons/centre/directory/en</a>
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## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

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

Corrosive to metals, Category 1 H290

Full text of classification categories and H statements : see section 16

### 2.2. Label elements

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

Hazard pictograms (CLP) :



GHS05

CLP Signal word	: Warning
Hazard statements (CLP)	: H290 - May be corrosive to metals
Precautionary statements (CLP)	: P234 - Keep only in original container P390 - Absorb spillage to prevent material damage P406 - Store in corrosive resistant container with a resistant inner liner

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substance

Name	: Fe-DTPA 6%
CAS No	: 85959-68-8
EC no	: 289-064-0

# Fe-DTPA 6%

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according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EC) No. 453/2010

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Diethylenetriaminepentaacetic acid, ferric-diammonium complex	(CAS No) 85959-68-8 (EC no) 289-064-0 (REACH-no) 01-21 19980791-27	53	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

- 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 : Product at 20°C has so a low pressure tension that breathing harmful concentration for health is very limited. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
- First-aid measures after skin contact : Wash skin with plenty of water. Wash with plenty of soap and water. Take off immediately all contaminated clothing and wash it before reuse. If skin irritation or rash occurs: Get medical advice/attention.
- First-aid measures after eye contact : Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- First-aid measures after ingestion : Rinse mouth with water. If the person is fully conscious, make him/her drink plenty of water. Never give an unconscious person anything to drink. Ingestion of large quantities: immediately to hospital.

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

- Symptoms/injuries after inhalation : No effects known.
- Symptoms/injuries after skin contact : No effects known.
- Symptoms/injuries after eye contact : Mild eye irritation.
- Symptoms/injuries after ingestion : AFTER ABSORPTION OF HIGH QUANTITIES: Gastrointestinal complaints. Feeling of weakness. Metal taste.

### 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 : All extinguishing media allowed. Making extinguishing agents environment-friendly. Preferably: quantities of water.
- Unsuitable extinguishing media : No unsuitable extinguishing media known.

### 5.2. Special hazards arising from the substance or mixture

- Fire hazard : Non combustible.
- Explosion hazard : No direct explosion hazard.
- Reactivity in case of fire : Stable under use and storage conditions as recommended in section 7.

### 5.3. Advice for firefighters

- Precautionary measures fire : Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighbourhood close doors and windows.
- Protection during firefighting : Do not breathe fumes from fires or vapours from decomposition. Fire fighters have to wear suited clothing and an independent repertory device (SCBA) that covers the face completely with pressure. 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.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Ensure adequate ventilation. Avoid contact with skin and eyes. Avoid all unnecessary exposure.

#### 6.1.1. For non-emergency personnel

- Protective equipment : Wear suitable protective clothing. Concerning personal protective equipment to use, see section 8.

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Emergency procedures : Mark the danger area. Evacuate unnecessary personnel. Only qualified personnel equipped with suitable protective equipment may intervene. Wash contaminated clothes.

### 6.1.2. For emergency responders

Protective equipment : Wear suitable protective clothing. Concerning personal protective equipment to use, see section 8.

### 6.2. Environmental precautions

Prevent spreading in sewers. Prevent soil and water pollution. Dam up the liquid spill.

### 6.3. Methods and material for containment and cleaning up

For containment : Stop leak if safe to do so. Contain released substance, pump into suitable containers.

Methods for cleaning up : Take up liquid spill into a non combustible material e.g.: sand, earth, vermiculite. Scoop absorbed substance into closing containers. Wash away remainder with plenty of water. Wash clothing and equipment after handling.

Other information : Corrosion-proof appliances. Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

See section 1 for emergency contact information. Concerning personal protective equipment to use, see item 8. Concerning disposal elimination after cleaning, see item 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Additional hazards when processed : May be corrosive to metals.

Precautions for safe handling : Avoid all unnecessary exposure. Refer to protective measures listed in Sections 7 and 8. Use corrosionproof equipment.

Hygiene measures : Remove contaminated clothes. Wash contaminated clothing before reuse. Always wash hands after handling the product. Do not eat, drink or smoke when using this product.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in original container. Store according to local legislation.

Incompatible materials : KEEP SUBSTANCE AWAY FROM: Iron. Do not use with copper/aluminium/zinc - risk of corrosion.

Storage temperature : 0 - 30 °C

Heat and ignition sources : KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.

Storage area : Meet the legal requirements. Store in a well-ventilated place. Store in a dry area. Keep out of direct sunlight.

Special rules on packaging : meet the legal requirements. correctly labelled. closing. Secure fragile packagings in solid containers. opaque. Keep only in original container.

Packaging materials : SUITABLE MATERIAL: polyethylene, polypropylene, steel with rubber inner lining. MATERIAL TO AVOID: metal, stainless steel, aluminium, zinc, iron, nickel, copper.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Fe-DTPA 6% (85959-68-8)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	62500 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	22 mg/m <sup>3</sup>
Long-term - local effects, inhalation	10 mg/m <sup>3</sup>
DNEL/DMEL (General population)	
Long-term - systemic effects,oral	6.25 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	5.5 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	31250 mg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	6.1 mg/l
PNEC aqua (marine water)	0.61 mg/l
PNEC aqua (intermittent, marine water)	3 mg/l
PNEC (Soil)	
PNEC soil	1.21 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	49 mg/l

### 8.2. Exposure controls

Appropriate engineering controls : Facilities: shower, eye shower. Ensure good ventilation of the work station.

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

Hand protection : Gloves

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

Eye protection : Safety glasses

Type	Use	Characteristics	Standard
Safety glasses			EN 166

Skin and body protection : Wear suitable protective clothing

Respiratory protection : Respiratory protection not required in normal conditions



Environmental exposure controls : Concerning disposal elimination after cleaning, see section 13.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: liquid.
Colour	: reddish/brownish.
Odour	: Ammoniacal.
Odour threshold	: No data available
pH	: 6 - 8
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: 100 - 110 °C
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: ± 1.28 kg/l
Solubility	: Water: completely soluble. Water: 678 g/l
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: Non-flammable/non-explosive.
Oxidising properties	: Not applicable.
Explosive limits	: No data available

### 9.2. Other information

Additional information : Corrosive to metals

## 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

To our knowledge, the product does not present any particular risk, under normal conditions of use.

### 10.4. Conditions to avoid

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Avoid high temperatures.

### 10.5. Incompatible materials

Oxidizing Agents. Reducing agent. Strong bases. Strong acids. peroxides, e.g. hydrogen peroxide. chlorine-based bleaching agents. metals. metal powders. . May be corrosive to metals.

### 10.6. Hazardous decomposition products

On heating/burning: release of toxic and corrosive gases/vapours nitrous vapours. Carbon oxides (CO, CO<sub>2</sub>). Metal oxides. Chlorine.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

Fe-DTPA 6% (85959-68-8)	
LD50 oral	> 2000 mg/kg bodyweight
Diethylenetriaminepentaacetic acid, ferric-diammonium complex (85959-68-8)	
LD50 oral rat	> 2000 mg/kg

Skin corrosion/irritation	: Not classified ((OECD 409 method)) pH: 6 - 8
Serious eye damage/irritation	: Not classified ((OECD 405 method)) pH: 6 - 8
Respiratory or skin sensitisation	: Not classified ((OECD 429 method))
Germ cell mutagenicity	: Not classified (Conclusive but not sufficient for classification)
Carcinogenicity	: Not classified (Conclusive but not sufficient for classification)
Reproductive toxicity	: Not classified (Conclusive but not sufficient for classification)
Specific target organ toxicity (single exposure)	: Not classified (Conclusive but not sufficient for classification)
Specific target organ toxicity (repeated exposure)	: Not classified (Conclusive but not sufficient for classification)
Aspiration hazard	: Not classified

## SECTION 12: Ecological information

### 12.1. Toxicity

No additional information available

### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

No additional information available

### 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.
Waste treatment methods	: Do not discharge into drains or rivers. Empty containers should be taken for recycle, recovery or waste in accordance with local regulation.
Waste disposal recommendations	: Dispose of contents/container to Remove to an authorized waste treatment plant.
Additional information	: Hazardous waste according to Directive 2008/98/EC.
European List of Waste (LoW) code	: 06 03 14 - solid salts and solutions other than those mentioned in 06 03 11 and 06 03 13

## SECTION 14: Transport information






In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number</b>				
1760	1760	1760	1760	1760

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ADR	IMDG	IATA	ADN	RID
<b>14.2. UN proper shipping name</b>				
CORROSIVE LIQUID, N.O.S.	CORROSIVE LIQUID, N.O.S.	Corrosive liquid, n.o.s.	CORROSIVE LIQUID, N.O.S.	CORROSIVE LIQUID, N.O.S.
<b>Transport document description</b>				
UN 1760 CORROSIVE LIQUID, N.O.S. (CONTAINS Diethylenetriaminepentaacetic acid, ferric-diammonium complex, aqueous solution), 8, III, (E)	UN 1760 CORROSIVE LIQUID, N.O.S. (CONTAINS Diethylenetriaminepentaacetic acid, ferric-diammonium complex, aqueous solution), 8, III			
<b>14.3. Transport hazard class(es)</b>				
8	8	8	8	8
				
<b>14.4. Packing group</b>				
III	III	III	III	III
<b>14.5. Environmental hazards</b>				
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No
No supplementary information available				

### 14.6. Special precautions for user

#### - Overland transport

Classification code (ADR)	: C9
Special provisions (ADR)	: 274
Limited quantities (ADR)	: 5I
Excepted quantities (ADR)	: E1
Packing instructions (ADR)	: P001, IBC03, LP01, R001
Mixed packing provisions (ADR)	: MP19
Portable tank and bulk container instructions (ADR)	: T7
Portable tank and bulk container special provisions (ADR)	: TP1, TP28
Tank code (ADR)	: L4BN
Vehicle for tank carriage	: AT
Transport category (ADR)	: 3
Special provisions for carriage - Packages (ADR)	: V12
Hazard identification number (Kemler No.)	: 80
Orange plates	: 

Tunnel restriction code (ADR)	: E
EAC code	: 2X
APP code	: B

#### - Transport by sea

Special provisions (IMDG)	: 223, 274
Limited quantities (IMDG)	: 5 L
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: P001, LP01
IBC packing instructions (IMDG)	: IBC03
Tank instructions (IMDG)	: T7
Tank special provisions (IMDG)	: TP1, TP28
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-B
Stowage category (IMDG)	: A

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### - Air transport

PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y841
PCA limited quantity max net quantity (IATA)	: 1L
PCA packing instructions (IATA)	: 852
PCA max net quantity (IATA)	: 5L
CAO packing instructions (IATA)	: 856
CAO max net quantity (IATA)	: 60L
Special provisions (IATA)	: A3
ERG code (IATA)	: 8L

### - Inland waterway transport

Classification code (ADN)	: C9
Special provisions (ADN)	: 274
Limited quantities (ADN)	: 5 L
Excepted quantities (ADN)	: E1
Carriage permitted (ADN)	: T
Equipment required (ADN)	: PP, EP
Number of blue cones/lights (ADN)	: 0

### - Rail transport

Classification code (RID)	: C9
Special provisions (RID)	: 274
Limited quantities (RID)	: 5L
Excepted quantities (RID)	: E1
Packing instructions (RID)	: P001, IBC03, LP01, R001
Mixed packing provisions (RID)	: MP19
Portable tank and bulk container instructions (RID)	: T7
Portable tank and bulk container special provisions (RID)	: TP1, TP28
Tank codes for RID tanks (RID)	: L4BN
Transport category (RID)	: 3
Special provisions for carriage – Packages (RID)	: W12
Colis express (express parcels) (RID)	: CE8
Hazard identification number (RID)	: 80

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## 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-DTPA 6% is not on the REACH Candidate List

Contains no substance on the REACH candidate list

Fe-DTPA 6% is not on the REACH Annex XIV List

Contains no REACH Annex XIV substances

#### 15.1.2. National regulations

##### Germany

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

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NIET-limitatieve lijst van voor de voortplanting : The substance is not listed  
giftige stoffen – Ontwikkeling

### 15.2. Chemical safety assessment

No additional information available

## SECTION 16: Other information

Abbreviations and acronyms:

CLP	CLP = Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
REACH	REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
SDS	SDS = Safety Data Sheet
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
IATA	International Air Transport Association
RID	Regulations concerning the International Carriage of Dangerous Goods by Rai
IMDG	International Maritime Dangerous Goods
OECD	Organisation for Economic Co-operation and Development
DNEL	DNEL = Derived-No Effect Level
PNEC	PNEC = Predicted No-Effect Concentration
STP	Sewage treatment plant

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

Other information : **DISCLAIMER OF LIABILITY** The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

Full text of H- and EUH-statements:

Met. Corr. 1	Corrosive to metals, Category 1
H290	May be corrosive to metals

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*