

**FE-CL-R1SZ - DETERMINATION OF IRON REAGENT 1****SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

**1.1 Product identifier:** FE-CL-R1SZ - DETERMINATION OF IRON REAGENT 1

**Other means of identification:**

**UFI:** T690-30H7-F00V-F7JH

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

Relevant uses: Used in Spectrophotometry. For industrial user only.

Uses advised against: All uses not specified in this section or in section 7.3

**1.3 Details of the supplier of the safety data sheet:**

3S Analyzers Srl  
Via Molino Nuovo 12  
16036 Avegno - Ge - Italy  
Phone: +390185799024  
SDS@3s-analyzers.eu  
www.3s-analyzers.eu

**1.4 Emergency telephone number:**

**SECTION 2: HAZARDS IDENTIFICATION \*\***

**2.1 Classification of the substance or mixture:**

**CLP Regulation (EC) No 1272/2008:**

Classification of this product has been carried out in accordance with CLP Regulation (EC) No 1272/2008.

Acute Tox. 4: Acute toxicity, Category 4, H302+H312+H332

Eye Dam. 1: Serious eye damage, Category 1, H318

Skin Corr. 1B: Skin corrosion, Category 1B, H314

STOT SE 3: Respiratory tract toxicity, single exposure, Category 3, H335

**2.2 Label elements:**

**CLP Regulation (EC) No 1272/2008:**

**Danger**



**Hazard statements:**

Acute Tox. 4: H302+H312+H332 - Harmful if swallowed, in contact with skin or if inhaled.

Skin Corr. 1B: H314 - Causes severe skin burns and eye damage.

STOT SE 3: H335 - May cause respiratory irritation.

**Precautionary statements:**

P280: Wear protective gloves/face protection/protective clothing/respiratory protection/protective footwear.

P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P302+P352: IF ON SKIN: Wash with plenty of water.

P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P403+P233: Store in a well-ventilated place. Keep container tightly closed.

P501: Dispose of contents/container in accordance with regulations on hazardous waste or packaging and packaging waste respectively.

**Substances that contribute to the classification**

thioglycolic acid; ammonia

**Acute Toxicity Estimate (ATE mix):**

11,88 % (oral), 11,88 % (dermal), 11,88 % (inhalation) of the mixture consists of ingredient(s) of unknown toxicity

**UFI:** T690-30H7-F00V-F7JH

**2.3 Other hazards:**

*\*\* Changes with regards to the previous version*

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# Safety data sheet

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## FE-CL-R1SZ - DETERMINATION OF IRON REAGENT 1

### SECTION 2: HAZARDS IDENTIFICATION \*\* (continued)

Product does not meet PBT/vPvB criteria  
Endocrine-disrupting properties: The product does not meet the criteria.

\*\* Changes with regards to the previous version

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS \*\*

#### 3.1 Substance:

Non-applicable

#### 3.2 Mixture:

**Chemical description:** Mixture of substances

#### Components:

In accordance with Annex II of Regulation (EC) No 1907/2006 (point 3), the product contains:

| Identification   | Chemical name/Classification           |  | Concentration |
|--|--|--|---------------|
| CAS: 68-11-1<br>EC: 200-677-4<br>Index: Non-applicable<br>REACH: 01-2119494933-24-XXXX | <b>thioglycolic acid<sup>(1)</sup></b> | ATP CLP00  | 10 - <25 %    |
|  | Regulation 1272/2008                   | Acute Tox. 3: H301+H311+H331; Skin Corr. 1B: H314 - Danger |               |
| CAS: 1336-21-6<br>EC: 215-647-6<br>Index: 007-001-01-2<br>REACH: 01-2119982985-14-XXXX | <b>ammonia<sup>(1)</sup></b>           | ATP CLP00  | 10 - <25 %    |
|  | Regulation 1272/2008                   | Aquatic Acute 1: H400; Skin Corr. 1B: H314 - Danger        |               |

<sup>(1)</sup> Substances presenting a health or environmental hazard which meet criteria laid down in Regulation (EU) No. 2020/878

To obtain more information on the hazards of the substances consult sections 11, 12 and 16.

#### Other information:

| Identification                             | Specific concentration limit  |
|--|-------------------------------|
| ammonia<br>CAS: 1336-21-6<br>EC: 215-647-6 | % (w/w) >=5: STOT SE 3 - H335 |

Acute toxicity estimate for the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or as determined in accordance with Annex I to that Regulation:

| Identification    | Acute toxicity  |                  | Genus |
|-------------------|-----------------|------------------|-------|
| thioglycolic acid | LD50 oral       | 242 mg/kg        | Mouse |
| CAS: 68-11-1      | LD50 dermal     | 300 mg/kg (ATEi) |       |
| EC: 200-677-4     | LC50 inhalation | 3 mg/L (ATEi)    |       |

\*\* Changes with regards to the previous version

### SECTION 4: FIRST AID MEASURES

#### 4.1 Description of first aid measures:

Request medical assistance immediately, showing the SDS of this product.

#### By inhalation:

Remove the person affected from the area of exposure, provide with fresh air and keep at rest. In serious cases such as cardiorespiratory failure, artificial resuscitation techniques will be necessary (mouth to mouth resuscitation, cardiac massage, oxygen supply, etc.) requiring immediate medical assistance.

#### By skin contact:

Remove contaminated clothing and footwear, rinse skin or shower the person affected if appropriate with plenty of cold water and neutral soap. In serious cases see a doctor. If the product causes burns or freezing, clothing should not be removed as this could worsen the injury caused if it is stuck to the skin. If blisters form on the skin, these should never be burst as this will increase the risk of infection.

#### By eye contact:

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Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, in which case this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.

**By ingestion/aspiration:**

Request immediate medical assistance, showing the SDS of this product. Do not induce vomiting, because its expulsion from the stomach can be hazardous to the mucus of the main digestive tract, and also risk damage to the respiratory system through inhalation. Rinse out the mouth and throat, as they may have been affected during ingestion. In the case of loss of consciousness do not administer anything orally unless supervised by a doctor. Keep the person affected at rest.

**4.2 Most important symptoms and effects, both acute and delayed:**

Acute and delayed effects are indicated in sections 2 and 11.

**4.3 Indication of any immediate medical attention and special treatment needed:**

Not relevant

**SECTION 5: FIREFIGHTING MEASURES****5.1 Extinguishing media:****Suitable extinguishing media:**

Product is non-flammable under normal conditions of storage, handling and use. In the case of combustion as a result of improper handling, storage or use preferably use polyvalent powder extinguishers (ABC powder), in accordance with the Regulation on fire protection systems.

**Unsuitable extinguishing media:**

Non-applicable

**5.2 Special hazards arising from the substance or mixture:**

As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

**5.3 Advice for firefighters:**

Depending on the magnitude of the fire it may be necessary to use full protective clothing and self-contained breathing apparatus (SCBA). Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...) in accordance with Directive 89/654/EC.

**Additional provisions:**

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Eliminate all sources of ignition. In case of fire, cool the storage containers and tanks for products susceptible to combustion, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

**SECTION 6: ACCIDENTAL RELEASE MEASURES****6.1 Personal precautions, protective equipment and emergency procedures:****For non-emergency personnel:**

Isolate leaks provided that there is no additional risk for the people performing this task. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Evacuate the area and keep out those who do not have protection.

**For emergency responders:**

Wear protective equipment. Keep unprotected persons away. See section 8.

**6.2 Environmental precautions:**

It is recommended to avoid environmental spillage of both the product and its container.

**6.3 Methods and material for containment and cleaning up:**

It is recommended:

Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13.

**6.4 Reference to other sections:**

See sections 8 and 13.

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**FE-CL-R1SZ - DETERMINATION OF IRON REAGENT 1****SECTION 7: HANDLING AND STORAGE****7.1 Precautions for safe handling:****A.- General precautions for safe use**

Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

**B.- Technical recommendations for the prevention of fires and explosions**

Product is non-flammable under normal conditions of storage, handling and use. It is recommended to transfer at slow speeds to avoid the generation of electrostatic charges that can affect flammable products. Consult section 10 for information on conditions and materials that should be avoided.

**C.- Technical recommendations on general occupational hygiene**

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

**D.- Technical recommendations to prevent environmental risks**

It is recommended to have absorbent material available at close proximity to the product (See subsection 6.3)

**7.2 Conditions for safe storage, including any incompatibilities:****A.- Specific storage requirements**

Minimum Temp.: 5 °C

Maximum Temp.: 20 °C

**B.- General conditions for storage**

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

**7.3 Specific end use(s):**

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1 Control parameters:**

Substances whose occupational exposure limits have to be monitored in the workplace (European OEL, not country-specific legislation):

There are no applicable occupational exposure limits for the substances contained in the product

**DNEL (Workers):**

| Identification                                     |            | Short exposure         |                        | Long exposure          |              |
|--|------------|------------------------|------------------------|------------------------|--------------|
|  |            | Systemic               | Local                  | Systemic               | Local        |
| thioglycolic acid<br>CAS: 68-11-1<br>EC: 200-677-4 | Oral       | Not relevant           | Not relevant           | Not relevant           | Not relevant |
|  | Dermal     | Not relevant           | Not relevant           | 2,24 mg/kg             | Not relevant |
|  | Inhalation | 4,54 mg/m <sup>3</sup> | 4,54 mg/m <sup>3</sup> | 1,58 mg/m <sup>3</sup> | Not relevant |

**DNEL (General population):**

| Identification                                     |            | Short exposure |              | Long exposure          |              |
|--|------------|----------------|--------------|------------------------|--------------|
|  |            | Systemic       | Local        | Systemic               | Local        |
| thioglycolic acid<br>CAS: 68-11-1<br>EC: 200-677-4 | Oral       | Not relevant   | Not relevant | 0,08 mg/kg             | Not relevant |
|  | Dermal     | Not relevant   | Not relevant | 0,8 mg/kg              | Not relevant |
|  | Inhalation | Not relevant   | Not relevant | 0,28 mg/m <sup>3</sup> | Not relevant |

**PNEC:**

| Identification                                     |              |              |                         |            |  |
|--|--------------|--------------|-------------------------|------------|--|
| thioglycolic acid<br>CAS: 68-11-1<br>EC: 200-677-4 | STP          | 0,5 mg/L     | Fresh water             | 0,027 mg/L |  |
|  | Soil         | 0,004 mg/kg  | Marine water            | 0,003 mg/L |  |
|  | Intermittent | 0,27 mg/L    | Sediment (Fresh water)  | 0,1 mg/kg  |  |
|  | Oral         | Not relevant | Sediment (Marine water) | 0,01 mg/kg |  |

**8.2 Exposure controls:**

A.- Individual protection measures, such as personal protective equipment

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### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

As a preventative measure it is recommended to use basic Personal Protective Equipment, with the corresponding <<CE marking>> in accordance with Regulation (EU) 2016/425. For more information on Personal Protective Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1. All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

#### B.- Respiratory protection



| Pictogram   | PPE                               | Labelling  | CEN Standard        | Remarks  |
|---|-----------------------------------|--|---------------------|--|
| <br>Mandatory respiratory tract protection | Filter mask for gases and vapours | <br>CAT III | EN 405:2002+A1:2010 | Replace when there is a taste or smell of the contaminant inside the face mask. If the contaminant comes with warnings it is recommended to use isolation equipment. |

#### C.- Specific protection for the hands





| Pictogram  | PPE  | Labelling  | CEN Standard      | Remarks  |
|--|--|--|-------------------|--|
| <br>Mandatory hand protection | Chemical protective gloves (Material: Butyl, Breakthrough time: > 480 min, Thickness: 0.75 mm) | <br>CAT III | EN ISO 21420:2020 | Replace the gloves at any sign of deterioration. |

As the product is a mixture of several substances, the resistance of the glove material can not be calculated in advance with total reliability and has therefore to be checked prior to the application.



#### D.- Eye and face protection

| Pictogram  | PPE         | Labelling   | CEN Standard  | Remarks   |
|--|-------------|---|---|---|
| <br>Mandatory face protection | Face shield | <br>CAT II | EN 166:2002<br>UNE-EN ISO 18526-1 al 4:2020<br>UNE-EN ISO 18526-1 al 4:2020<br>EN ISO 4007:2018 | Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing. |

#### E.- Body protection

| Pictogram   | PPE   | Labelling  | CEN Standard  | Remarks   |
|---|---|--|---|---|
| <br>Mandatory complete body protection | Disposable clothing for protection against chemical risks | <br>CAT III | EN 13034:2005+A1:2009<br>UNE-EN ISO 18526-1 al 4:2020<br>EN ISO 13982-1:2005/A1:2011<br>EN ISO 6529:2013<br>EN ISO 6530:2005<br>EN 464:1995 | For professional use only. Clean periodically according to the manufacturer's instructions. |
| <br>Mandatory foot protection          | Safety footwear for protection against chemical risk      | <br>CAT III | EN ISO 20345:2022<br>EN 13832-1:2019  | Replace boots at any sign of deterioration.   |

#### F.- Additional emergency measures

| Emergency measure   | Standards                                       | Emergency measure  | Standards                                      |
|---|---|--|--|
| <br>Emergency shower | ANSI Z358-1<br>ISO 3864-1:2011, ISO 3864-4:2011 | <br>Eyewash stations | DIN 12 899<br>ISO 3864-1:2011, ISO 3864-4:2011 |

#### Environmental exposure controls:

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1.D

#### Volatile organic compounds:

With regard to Directive 2010/75/EU, this product has the following characteristics:

V.O.C. (Supply): 0 % weight  
V.O.C. density at 20 °C: 0 kg/m<sup>3</sup> (0 g/L)

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**FE-CL-R1SZ - DETERMINATION OF IRON REAGENT 1****SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)**

|                           |              |
|---------------------------|--------------|
| Average carbon number:    | Not relevant |
| Average molecular weight: | Not relevant |

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES****9.1 Information on basic physical and chemical properties:**

For complete information see the product datasheet.

**Appearance:**

|                          |   |
|--------------------------|---|
| Physical state at 20 °C: | Liquid  |
| Appearance:              | Crystalline   |
| Colour:                  |  Amber |
| Odour:                   | Repulsive   |
| Odour threshold:         | Not relevant *  |

**Volatility:**

|  |                         |
|--|-------------------------|
| Boiling point at atmospheric pressure: | 114 °C                  |
| Vapour pressure at 20 °C:              | 2223 Pa                 |
| Vapour pressure at 50 °C:              | 11712,77 Pa (11,71 kPa) |
| Evaporation rate at 20 °C:             | Not relevant *          |

**Product description:**

|  |                |
|--|----------------|
| Density at 20 °C:                            | Not relevant * |
| Relative density at 20 °C:                   | Not relevant * |
| Dynamic viscosity at 20 °C:                  | Not relevant * |
| Kinematic viscosity at 20 °C:                | Not relevant * |
| Kinematic viscosity at 40 °C:                | Not relevant * |
| Concentration:                               | Not relevant * |
| pH:  | ≈3             |
| Vapour density at 20 °C:                     | Not relevant * |
| Partition coefficient n-octanol/water 20 °C: | Not relevant * |
| Solubility in water at 20 °C:                | Not relevant * |
| Solubility properties:                       | Not relevant * |
| Decomposition temperature:                   | Not relevant * |
| Melting point/freezing point:                | Not relevant * |

**Flammability:**

|                            |                        |
|----------------------------|------------------------|
| Flash Point:               | Non Flammable (>60 °C) |
| Flammability (solid, gas): | Not relevant *         |
| Autoignition temperature:  | 315 °C                 |
| Lower flammability limit:  | Not relevant *         |
| Upper flammability limit:  | Not relevant *         |

**Particle characteristics:**

|                             |                |
|-----------------------------|----------------|
| Median equivalent diameter: | Non-applicable |
|-----------------------------|----------------|

**9.2 Other information:****Information with regard to physical hazard classes:**

|                       |                |
|-----------------------|----------------|
| Explosive properties: | Not relevant * |
| Oxidising properties: | Not relevant * |
| Corrosive to metals:  | Not relevant * |

\*Not relevant due to the nature of the product, not providing information property of its hazards.

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### FE-CL-R1SZ - DETERMINATION OF IRON REAGENT 1

#### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)

|  |                |
|--|----------------|
| Heat of combustion:  | Not relevant * |
| Aerosols-total percentage (by mass) of flammable components: | Not relevant * |
| <b>Other safety characteristics:</b>                         |                |
| Surface tension at 20 °C:                                    | Not relevant * |
| Refraction index:  | Not relevant * |

\*Not relevant due to the nature of the product, not providing information property of its hazards.

#### SECTION 10: STABILITY AND REACTIVITY

##### 10.1 Reactivity:

No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7 from Safety Data Sheet.

##### 10.2 Chemical stability:

Chemically stable under the indicated conditions of storage, handling and use.

##### 10.3 Possibility of hazardous reactions:

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

##### 10.4 Conditions to avoid:

Applicable for handling and storage at room temperature:

| Shock and friction | Contact with air | Increase in temperature | Sunlight       | Humidity       |
|--------------------|------------------|-------------------------|----------------|----------------|
| Not applicable     | Not applicable   | Not applicable          | Not applicable | Not applicable |

##### 10.5 Incompatible materials:

| Acids              | Water          | Oxidising materials | Combustible materials | Others                        |
|--------------------|----------------|---------------------|-----------------------|-------------------------------|
| Avoid strong acids | Not applicable | Precaution          | Not applicable        | Avoid alkalis or strong bases |

##### 10.6 Hazardous decomposition products:

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO<sub>2</sub>), carbon monoxide and other organic compounds.

#### SECTION 11: TOXICOLOGICAL INFORMATION \*\*

##### 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008:

The experimental information related to the toxicological properties of the product itself is not available

##### Dangerous health implications:

In case of exposure that is repetitive, prolonged or at concentrations higher than the recommended occupational exposure limits, adverse effects on health may result, depending on the means of exposure:

A- Ingestion (acute effect):

- Acute toxicity: The consumption of a considerable dose can cause irritation in the throat, abdominal pain, nausea and vomiting.
- Corrosivity/Irritability: Corrosive product, if it is swallowed causes burns destroying the tissues. For more information about secondary effects from skin contact see section 2.

B- Inhalation (acute effect):

- Acute toxicity : Exposure in high concentration can interfere with the central nervous system causing headache, dizziness, vertigo, nausea, vomiting, confusion, and in serious cases, loss of consciousness.
- Corrosivity/Irritability: Prolonged inhalation of the product is corrosive to mucous membranes and the upper respiratory tract

C- Contact with the skin and the eyes (acute effect):

- Contact with the skin: Above all, skin contact may occur as fabrics of all thicknesses can be destroyed, resulting in burns. For more information on the secondary effects see section 2.
- Contact with the eyes: Produces serious eye damage after contact.

D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):

\*\* Changes with regards to the previous version

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**FE-CL-R1SZ - DETERMINATION OF IRON REAGENT 1****SECTION 11: TOXICOLOGICAL INFORMATION \*\* (continued)**

- Carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for the effects mentioned. For more information see section 3.
- IARC: Not relevant
- Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
- Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

**E- Sensitizing effects:**

- Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous with sensitising effects. For more information see section 3.
- Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

**F- Specific target organ toxicity (STOT) - single exposure:**

Causes irritation in respiratory passages, which is normally reversible and limited to the upper respiratory passages.

**G- Specific target organ toxicity (STOT)-repeated exposure:**

- Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
- Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

**H- Aspiration hazard:**

Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

**Other information:**

Not relevant

**Specific toxicology information on the substances:**

| Identification    | Acute toxicity  |                  | Genus |
|-------------------|-----------------|------------------|-------|
| thioglycolic acid | LD50 oral       | 242 mg/kg (ATEi) | Mouse |
| CAS: 68-11-1      | LD50 dermal     | 300 mg/kg (ATEi) |       |
| EC: 200-677-4     | LC50 inhalation | 3 mg/L (ATEi)    |       |

**Acute Toxicity Estimate (ATE mix):**

| ATE mix    |                                       | Ingredient(s) of unknown toxicity |
|------------|---------------------------------------|-----------------------------------|
| Oral       | 1075,89 mg/kg (Calculation method)    | 11,88 %                           |
| Dermal     | 1333,74 mg/kg (Calculation method)    | 11,88 %                           |
| Inhalation | 13,34 mg/L (4 h) (Calculation method) | 11,88 %                           |

**11.2 Information on other hazards:****Endocrine disrupting properties**

Endocrine-disrupting properties: The product does not meet the criteria.

**Other information**

Not relevant

**\*\* Changes with regards to the previous version**

**SECTION 12: ECOLOGICAL INFORMATION \*\***

The experimental information related to the eco-toxicological properties of the product itself is not available

Based on available data, the classification criteria are not met. However, it does contain substances classified as hazardous for this effect. For more information see section 3.

**12.1 Toxicity:****Acute toxicity:**

**\*\* Changes with regards to the previous version**

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**FE-CL-R1SZ - DETERMINATION OF IRON REAGENT 1****SECTION 12: ECOLOGICAL INFORMATION \*\* (continued)**

| Identification    | Concentration         | Species             | Genus      |
|-------------------|-----------------------|---------------------|------------|
| thioglycolic acid | LC50 30 mg/L (96 h)   | Pimephales promelas | Fish       |
| CAS: 68-11-1      | EC50 Not relevant     |                     |            |
| EC: 200-677-4     | EC50 Not relevant     |                     |            |
| ammonia           | LC50 0,89 mg/L (96 h) | Oncorhynchus mykiss | Fish       |
| CAS: 1336-21-6    | EC50 101 mg/L (48 h)  | Daphnia magna       | Crustacean |
| EC: 215-647-6     | EC50 Not relevant     |                     |            |

**12.2 Persistence and degradability:**

Not available

**12.3 Bioaccumulative potential:****Substance-specific information:**

| Identification    | Bioaccumulation potential |       |
|-------------------|---------------------------|-------|
| thioglycolic acid | BCF                       | 0.69  |
| CAS: 68-11-1      | Pow Log                   | 0.09  |
| EC: 200-677-4     | Potential                 | Low   |
| ammonia           | BCF                       |       |
| CAS: 1336-21-6    | Pow Log                   | -0.64 |
| EC: 215-647-6     | Potential                 |       |

**12.4 Mobility in soil:**

| Identification    | Absorption/desorption |              | Volatility |                                 |
|-------------------|-----------------------|--------------|------------|---------------------------------|
| thioglycolic acid | Koc                   | 27           | Henry      | 1,925E-3 Pa·m <sup>3</sup> /mol |
| CAS: 68-11-1      | Conclusion            | Very High    | Dry soil   | No                              |
| EC: 200-677-4     | Surface tension       | Not relevant | Moist soil | No                              |

**12.5 Results of PBT and vPvB assessment:**

Product does not meet PBT/vPvB criteria

**12.6 Endocrine disrupting properties:**

Endocrine-disrupting properties: The product does not meet the criteria.

**12.7 Other adverse effects:**

Not described

*\*\* Changes with regards to the previous version***SECTION 13: DISPOSAL CONSIDERATIONS****13.1 Waste treatment methods:**

| Code      | Description  | Waste class (Regulation (EU) No 1357/2014) |
|-----------|--|--|
| 16 05 06* | laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals | Hazardous                                  |

**Type of waste (Regulation (EU) No 1357/2014):**

HP6 Acute Toxicity, HP8 Corrosive

**Waste management (disposal and evaluation):**

Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98/EC). As under 15 01 (2014/955/EC) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-hazardous residue. Waste should not be disposed of to drains. See paragraph 6.2.

**Regulations related to waste management:**

In accordance with Annex II of Regulation (EC) No 1907/2006 (REACH) the community or state provisions related to waste management are stated

Community legislation: Directive 2008/98/EC, 2014/955/EU, Regulation (EU) No 1357/2014

*\*\* Changes with regards to the previous version*

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**FE-CL-R1SZ - DETERMINATION OF IRON REAGENT 1****SECTION 14: TRANSPORT INFORMATION \*\*****Transport of dangerous goods by land:**

With regard to ADR 2023 and RID 2023:



- |  |  |
|--|--|
| <b>14.1 UN number or ID number:</b>                                  | UN1760                                       |
| <b>14.2 UN proper shipping name:</b>                                 | CORROSIVE LIQUID, N.O.S. (thioglycolic acid) |
| <b>14.3 Transport hazard class(es):</b>                              | 8  |
| Labels:  | 8  |
| <b>14.4 Packing group:</b>   | II   |
| <b>14.5 Environmental hazards:</b>                                   | No   |
| <b>14.6 Special precautions for user</b>                             |  |
| Special regulations:   | 274  |
| Tunnel restriction code:   | E  |
| Physico-Chemical properties:   | see section 9                                |
| Limited quantities:  | 1 L  |
| <b>14.7 Maritime transport in bulk according to IMO instruments:</b> | Not relevant                                 |

**Transport of dangerous goods by sea:**

With regard to IMDG 41-22:



- |  |  |
|--|--|
| <b>14.1 UN number or ID number:</b>                                  | UN1760                                       |
| <b>14.2 UN proper shipping name:</b>                                 | CORROSIVE LIQUID, N.O.S. (thioglycolic acid) |
| <b>14.3 Transport hazard class(es):</b>                              | 8  |
| Labels:  | 8  |
| <b>14.4 Packing group:</b>   | II   |
| <b>14.5 Marine pollutant:</b>  | No   |
| <b>14.6 Special precautions for user</b>                             |  |
| Special regulations:   | 274  |
| EmS Codes:   | F-A, S-B                                     |
| Physico-Chemical properties:   | see section 9                                |
| Limited quantities:  | 1 L  |
| Segregation group:   | Not relevant                                 |
| <b>14.7 Maritime transport in bulk according to IMO instruments:</b> | Not relevant                                 |

**Transport of dangerous goods by air:**

With regard to IATA/ICAO 2024:



- |  |  |
|--|--|
| <b>14.1 UN number or ID number:</b>                                  | UN1760                                       |
| <b>14.2 UN proper shipping name:</b>                                 | CORROSIVE LIQUID, N.O.S. (thioglycolic acid) |
| <b>14.3 Transport hazard class(es):</b>                              | 8  |
| Labels:  | 8  |
| <b>14.4 Packing group:</b>   | II   |
| <b>14.5 Environmental hazards:</b>                                   | No   |
| <b>14.6 Special precautions for user</b>                             |  |
| Physico-Chemical properties:   | see section 9                                |
| <b>14.7 Maritime transport in bulk according to IMO instruments:</b> | Not relevant                                 |

*\*\* Changes with regards to the previous version***SECTION 15: REGULATORY INFORMATION****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:**

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**FE-CL-R1SZ - DETERMINATION OF IRON REAGENT 1****SECTION 15: REGULATORY INFORMATION (continued)**

- Article 95, REGULATION (EU) No 528/2012: Not relevant
- Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Not relevant
- Regulation (EU) No 2024/590, about substances that deplete the ozone layer: Not relevant
- REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Not relevant
- Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Not relevant

**Seveso III:**

Not relevant

**Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII REACH, etc ....):**

Shall not be used in:

- ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,
- tricks and jokes,
- games for one or more participants, or any article intended to be used as such, even with ornamental aspects.

**Specific provisions in terms of protecting people or the environment:**

It is recommended to use the information included in this safety data sheet as a basis for conducting workplace-specific risk assessments in order to establish the necessary risk prevention measures for the handling, use, storage and disposal of this product.

**Other legislation:**

The product could be affected by sectorial legislation

**15.2 Chemical safety assessment:**

The supplier has not carried out evaluation of chemical safety.

**SECTION 16: OTHER INFORMATION \*\*****Legislation related to safety data sheets:**

The SDS shall be supplied in an official language of the country where the product is placed on the market. This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) No 1907/2006 (COMMISSION REGULATION (EU) 2020/878).

**Modifications related to the previous Safety Data Sheet which concerns the ways of managing risks.:**

COMPOSITION/INFORMATION ON INGREDIENTS (SECTION 3, SECTION 11, SECTION 12):

- New declared substances
  - ammonia (1336-21-6)
  - thioglycolic acid (68-11-1)
- Removed substances
  - Disodium 4,4'-[3-(pyridin-2-yl)-1,2,4-triazine-5,6-diyl]bis(benzenesulphonate) (28048-33-1)

Substances that contribute to the classification (SECTION 2):

- New declared substances
  - ammonia (1336-21-6)
  - thioglycolic acid (68-11-1)
- Removed substances
  - Disodium 4,4'-[3-(pyridin-2-yl)-1,2,4-triazine-5,6-diyl]bis(benzenesulphonate) (28048-33-1)

CLP Regulation (EC) No 1272/2008 (SECTION 2, SECTION 16):

- Pictograms
- Hazard statements
- Precautionary statements

TRANSPORT INFORMATION (SECTION 14):

- UN number
- Packing group

**Texts of the legislative phrases mentioned in section 2:**

H314: Causes severe skin burns and eye damage.

H318: Causes serious eye damage.

H335: May cause respiratory irritation.

H302+H312+H332: Harmful if swallowed, in contact with skin or if inhaled.

**Texts of the legislative phrases mentioned in section 3:**

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3

**CLP Regulation (EC) No 1272/2008:**

*\*\* Changes with regards to the previous version*

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**FE-CL-R1SZ - DETERMINATION OF IRON REAGENT 1****SECTION 16: OTHER INFORMATION \*\* (continued)**

Acute Tox. 3: H301+H311+H331 - Toxic if swallowed, in contact with skin or if inhaled.

Aquatic Acute 1: H400 - Very toxic to aquatic life.

Skin Corr. 1B: H314 - Causes severe skin burns and eye damage.

**Classification procedure:**

Skin Corr. 1B: Calculation method

Eye Dam. 1: Calculation method

STOT SE 3: Calculation method

Acute Tox. 4: Calculation method

**Advice related to training:**

Training is recommended in order to prevent industrial risks for staff using this product and to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

**Principal bibliographical sources:**

<http://echa.europa.eu>

<http://eur-lex.europa.eu>

**Abbreviations and acronyms:**

ADR: European agreement concerning the international carriage of dangerous goods by road

IMDG: International maritime dangerous goods code

IATA: International Air Transport Association

ICAO: International Civil Aviation Organisation

COD: Chemical Oxygen Demand

BOD5: 5day biochemical oxygen demand

BCF: Bioconcentration factor

LD50: Lethal Dose 50

LC50: Lethal Concentration 50

EC50: Effective concentration 50

LogPOW: Octanolwater partition coefficient

Koc: Partition coefficient of organic carbon

UFI: unique formula identifier

IARC: International Agency for Research on Cancer

*\*\* Changes with regards to the previous version*

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation at European and state level, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product, it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

- END OF SAFETY DATA SHEET -