

This safety data sheet was created pursuant to the requirements of:  
UK REACH Regulations (SI 2019/758 as amended)

Revision date 16-Apr-2024

Revision Number 1

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

### 1.1. Product identifier

Product Code(s) 500019  
Safety data sheet number 500019  
Product Name FERROUS CHLORIDE 30% SOL

Pure substance/mixture Mixture

Contains IRON DICHLORIDE; FERRIC CHLORIDE; MANGANESE(II) CHLORIDE TETRAHYDRATE; NICKEL DICHLORIDE

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

Recommended use Water Treatment

### 1.3. Details of the supplier of the safety data sheet

#### **Supplier**

Univar Solutions UK Ltd  
Aquarius House  
6 Mid Point Business Park  
Bradford  
GBR

For further information, please contact

E-mail address SDS.EMEA@univarsolutions.com  
Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

### 1.4. Emergency telephone number

Emergency Telephone SGS - +32 (0)3 575 55 55 (24h)

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

|                                   |                     |
|-----------------------------------|---------------------|
| Corrosive to metals               | Category 1 - (H290) |
| Acute toxicity - Oral             | Category 4 - (H302) |
| Skin corrosion/irritation         | Category 2 - (H315) |
| Serious eye damage/eye irritation | Category 1 - (H318) |

### 2.2. Label elements

Contains IRON DICHLORIDE; FERRIC CHLORIDE; MANGANESE(II) CHLORIDE TETRAHYDRATE; NICKEL DICHLORIDE

**Signal word**

Danger

**Hazard statements**

H302 - Harmful if swallowed

H315 - Causes skin irritation

H318 - Causes serious eye damage

H290 - May be corrosive to metals

EUH208 - NICKEL DICHLORIDE May produce an allergic reaction.

**Precautionary statements**

P264 - Wash face, hands and any exposed skin thoroughly after handling

P280 - Wear protective gloves and eye/face protection

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

P501 - Dispose of contents/ container to an approved waste disposal plant

**Unknown aquatic toxicity****2.3. Other hazards**

Causes mild skin irritation.

## SECTION 3: Composition/information on ingredients

**3.1 Substances**

Not applicable

**3.2 Mixtures**

| Chemical name                                        | Weight-% | EC No (EU Index No) | UK REACH registration number | Classification according to GB CLP (SI 2020/1567 as amended)                             | Specific concentration limit (SCL) | M-Factor | M-Factor (long-term) |
|------------------------------------------------------|----------|---------------------|------------------------------|------------------------------------------------------------------------------------------|------------------------------------|----------|----------------------|
| IRON DICHLORIDE<br>7758-94-3                         | 20 - 30% | 231-843-4           | -                            | Acute Tox. 4 (H302)<br>Eye Dam. 1 (H318)                                                 | -                                  | -        | -                    |
| FERRIC CHLORIDE<br>7705-08-0                         | 0 - 10%  | 231-729-4           | -                            | Met. Corr. 1 (H290)<br>Acute Tox. 4 (H302)<br>Skin Irrit. 2 (H315)<br>Eye Dam. 1 (H318)  | -                                  | -        | -                    |
| MANGANESE(II) CHLORIDE<br>TETRAHYDRATE<br>13446-34-9 | 0 - 10%  | 231-869-6           | -                            | Aquatic Chronic 2 (H411)<br>STOT RE 2 (H373)<br>Acute Tox. 4 (H302)<br>Eye Dam. 1 (H318) | -                                  | -        | -                    |

|                                   |         |           |   |                                                                                                                                                                                                                                                       |                                                                                                                 |   |   |
|-----------------------------------|---------|-----------|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---|---|
| NICKEL<br>DICHLORIDE<br>7718-54-9 | 0 - 10% | 231-743-0 | - | Acute Tox. 3 (H301)<br>Acute Tox. 3 (H331)<br>Skin Irrit. 2 (H315)<br>Resp. Sens. 1 (H334)<br>Skin Sens. 1 (H317)<br>Muta. 2 (H341)<br>Carc. 1A (H350i)<br>Repr. 1B (H360D)<br>STOT RE 1 (H372)<br>Aquatic Acute 1 (H400)<br>Aquatic Chronic 1 (H410) | Skin Irrit. 2 ::<br>C>=20%<br>Skin Sens. 1 ::<br>C>=0.01%<br>STOT RE 1 ::<br>C>=1%<br>STOT RE 2 ::<br>0.1%<C<1% | 1 | 1 |
|-----------------------------------|---------|-----------|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---|---|

**Full text of H- and EUH-phrases: see section 16**

This product does not contain candidate substances of very high concern at a concentration  $\geq 0.1\%$  (UK REACH Article 59)

**SECTION 4: First aid measures****4.1. Description of first aid measures**

|                                           |                                                                                                                                                                                                                                                           |
|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>General advice</b>                     | Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.                                                                                                                                                         |
| <b>Inhalation</b>                         | Remove to fresh air. Get medical attention immediately if symptoms occur.                                                                                                                                                                                 |
| <b>Eye contact</b>                        | Get immediate medical attention. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. |
| <b>Skin contact</b>                       | Wash off immediately with soap and plenty of water for at least 15 minutes. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a doctor.                                                                       |
| <b>Ingestion</b>                          | Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Call a doctor.                                                                                                                                                |
| <b>Self-protection of the first aider</b> | Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).                                                                                                                                                             |

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

|                  |                                                                                                                                                     |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Symptoms</b>  | Burning sensation. May cause allergic skin reaction. Burning sensation. Itching. Rashes. Hives. Prolonged contact may cause redness and irritation. |
| <b>Eyes</b>      | Burning sensation.                                                                                                                                  |
| <b>Dermal</b>    | Irritating. Erythema (skin redness). Prolonged contact may cause redness and irritation. May cause allergic skin reaction. Hives. Itching. Rashes.  |
| <b>Ingestion</b> | Harmful if swallowed                                                                                                                                |

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

|                        |                                                                        |
|------------------------|------------------------------------------------------------------------|
| <b>Note to doctors</b> | May cause sensitisation in susceptible persons. 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.

**Large Fire** CAUTION: Use of water spray when fighting fire may be inefficient.

**Unsuitable extinguishing media** Do not scatter spilled material with high pressure water streams.

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

**Specific hazards arising from the chemical** Product is or contains a sensitiser. May cause sensitisation by skin contact.

**Hazardous combustion products** Hydrogen chloride.

## **5.3. Advice for firefighters**

**Special protective equipment and precautions for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

# **SECTION 6: Accidental release measures**

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

**Personal precautions** Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Ensure adequate ventilation.

**Other information** Refer to protective measures listed in Sections 7 and 8.

**For emergency responders** Use personal protection recommended in Section 8.

## **6.2. Environmental precautions**

**Environmental precautions** Prevent further leakage or spillage if safe to do so.

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

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Take up mechanically, placing in appropriate containers for disposal.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

## **6.4. Reference to other sections**

**Reference to other sections** See section 8 for more information. See section 13 for more information.

# **SECTION 7: Handling and storage**

## **7.1. Precautions for safe handling**

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Take off contaminated clothing and wash it before reuse.

**General hygiene considerations** Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product.

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

**Storage Conditions** Keep container tightly closed in a dry and well-ventilated place. Keep at a temperature not exceeding 30 °C. Keep from freezing. Store away from the following materials. alkali. Oxidising agents. Reducing agent.

**Packaging materials** Suitable container/equipment material: Plastic (PE, PP, PVC). Unsuitable container/equipment material: copper. stainless steel. Aluminium. Iron. Zinc.

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

**Specific use(s)**  
See section 1 for more information.

**Risk Management Methods (RMM)** The information required is contained in this Safety Data Sheet.

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters**

**Exposure Limits** This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

**Biological occupational exposure limits** This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

**Derived No Effect Level (DNEL) - Workers**

| Chemical name                | Oral | Dermal                 | Inhalation |
|------------------------------|------|------------------------|------------|
| IRON DICHLORIDE<br>7758-94-3 |      | 6.35 mg/kg/day [4] [6] |            |
| FERRIC CHLORIDE<br>7705-08-0 |      | 2.8 mg/kg/day [4] [6]  |            |

[4] Systemic health effects.

[6] Long term.

**Derived No Effect Level (DNEL) - General Public**

| Chemical name                | Oral                 | Dermal                | Inhalation |
|------------------------------|----------------------|-----------------------|------------|
| FERRIC CHLORIDE<br>7705-08-0 | 20 mg/kg/day [4] [7] | 1.4 mg/kg/day [4] [6] |            |

[4] Systemic health effects.

[6] Long term.

[7] Short term.

**Predicted No Effect Concentration (PNEC)** No information available.

**8.2. Exposure controls**

**Engineering controls** No information available.

**Personal protective equipment**

**Eye/face protection** Wear safety glasses with side shields (or goggles). Use eye protection according to EN 166.

**Hand protection** Ensure that the breakthrough time of the glove material is not exceeded. Refer to glove supplier for information on breakthrough time for specific gloves. Gloves must conform to standard EN 374.

| Gloves              |                                       |                 |                    |
|---------------------|---------------------------------------|-----------------|--------------------|
| Duration of contact | PPE - Glove material                  | Glove thickness | Break through time |
|                     | Polyvinyl chloride (PVC) Butyl rubber | 0.5 mm          | 480 minutes        |
|                     | Nitrile rubber                        | 0.35 mm         | 480 minutes        |

**Skin and body protection** Wear suitable protective clothing.

**Respiratory protection** No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

**General hygiene considerations** Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

|                 |                          |
|-----------------|--------------------------|
| Physical state  | Liquid                   |
| Appearance      | Liquid                   |
| Colour          | black green              |
| Odour           | Pungent.                 |
| Odour threshold | No information available |

| Property                                | Values                   | Remarks • Method          |
|-----------------------------------------|--------------------------|---------------------------|
| Melting point / freezing point          | -20 °C                   |                           |
| Initial boiling point and boiling range | > 110.00 °C              |                           |
| Flammability                            |                          | No information available. |
| Flammability Limit in Air               |                          | No information available. |
| Upper flammability or explosive limits  |                          |                           |
| Lower flammability or explosive limits  |                          |                           |
| Flash point                             |                          | No information available. |
| Autoignition temperature                |                          | No information available. |
| Decomposition temperature               |                          | No information available. |
| pH                                      |                          | No information available. |
| pH (as aqueous solution)                |                          | No information available. |
| Kinematic viscosity                     |                          | No information available. |
| Dynamic viscosity                       |                          | No information available. |
| Water solubility                        | Soluble in water         |                           |
| Solubility(ies)                         |                          | No information available. |
| Partition coefficient                   |                          | No information available. |
| Vapour pressure                         |                          | No information available. |
| Relative density                        | 1.22 - 1.28              |                           |
| Bulk density                            |                          | No information available  |
| Liquid Density                          | No information available | No information available  |
| Relative vapour density                 |                          | No information available. |
| Particle characteristics                |                          | No information available. |

|                            |                          |
|----------------------------|--------------------------|
| Particle Size              | No information available |
| Particle Size Distribution | No information available |
| Explosive properties       | No information available |
| Oxidising properties       | No information available |

## 9.2. Other information

### **SECTION 10: Stability and reactivity**

#### 10.1. Reactivity

|            |                     |
|------------|---------------------|
| Reactivity | Corrosive to metal. |
|------------|---------------------|

#### 10.2. Chemical stability

|           |                                 |
|-----------|---------------------------------|
| Stability | Stable under normal conditions. |
|-----------|---------------------------------|

#### Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

#### 10.3. Possibility of hazardous reactions

|                                    |                      |
|------------------------------------|----------------------|
| Possibility of hazardous reactions | Reacts with alkalis. |
|------------------------------------|----------------------|

#### 10.4. Conditions to avoid

|                     |                 |
|---------------------|-----------------|
| Conditions to avoid | Excessive heat. |
|---------------------|-----------------|

#### 10.5. Incompatible materials

|                        |                                                  |
|------------------------|--------------------------------------------------|
| Incompatible materials | Metals. Alkali. Oxidising agent. Reducing agent. |
|------------------------|--------------------------------------------------|

#### 10.6. Hazardous decomposition products

|                                  |                    |
|----------------------------------|--------------------|
| Hazardous decomposition products | Hydrogen chloride. |
|----------------------------------|--------------------|

### **SECTION 11: Toxicological information**

#### 11.1. Information on toxicological effects

##### Information on likely routes of exposure

##### **Product Information**

|              |                                                           |
|--------------|-----------------------------------------------------------|
| Inhalation   | May cause irritation.                                     |
| Eye contact  | Causes serious eye damage.                                |
| Skin contact | Causes skin irritation. May cause allergic skin reaction. |
| Ingestion    | Harmful if swallowed.                                     |

##### Symptoms related to the physical, chemical and toxicological characteristics

|          |                                                                                                                    |
|----------|--------------------------------------------------------------------------------------------------------------------|
| Symptoms | Redness. Burning. May cause blindness. Itching. Rashes. Hives. Prolonged contact may cause redness and irritation. |
|----------|--------------------------------------------------------------------------------------------------------------------|

##### Acute toxicity

**Numerical measures of toxicity**

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 1,730.10 mg/kg

**Component Information**

| Chemical name                          | Oral LD50            | Dermal LD50          | Inhalation LC50 |
|----------------------------------------|----------------------|----------------------|-----------------|
| IRON DICHLORIDE                        | = 450 mg/kg ( Rat )  | > 2000 mg/kg ( Rat ) | -               |
| FERRIC CHLORIDE                        | = 450 mg/kg ( Rat )  | -                    | -               |
| MANGANESE(II) CHLORIDE<br>TETRAHYDRATE | = 1484 mg/kg ( Rat ) | -                    | -               |
| NICKEL DICHLORIDE                      | = 175 mg/kg ( Rat )  | -                    | -               |

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Skin corrosion/irritation** Causes skin irritation.

**Serious eye damage/eye irritation** Causes serious eye damage.

**Respiratory or skin sensitisation** May cause an allergic skin reaction.

**Germ cell mutagenicity** No information available.

The table below indicates ingredients above the cut-off threshold considered as relevant which are listed as mutagenic.

| Chemical name     | United Kingdom |
|-------------------|----------------|
| NICKEL DICHLORIDE | Muta. 2        |

**Carcinogenicity** No information available.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Chemical name     | United Kingdom |
|-------------------|----------------|
| NICKEL DICHLORIDE | Carc. 1A       |

**Reproductive toxicity** No information available.

The table below indicates ingredients above the cut-off threshold considered as relevant which are listed as reproductive toxins.

| Chemical name     | United Kingdom |
|-------------------|----------------|
| NICKEL DICHLORIDE | Repr. 1B       |

**STOT - single exposure** No information available.

**STOT - repeated exposure** No information available.

**Aspiration hazard** No information available.

**Other adverse effects** No information available.

**SECTION 12: Ecological information****12.1. Toxicity****Ecotoxicity**

Not considered to be harmful to aquatic life.

**Unknown aquatic toxicity**

| Chemical name     | Algae/aquatic plants                                                                                                                       | Fish                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Toxicity to microorganisms | Crustacea                                                                                    |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------------------------------------------------------------------------------------------|
| FERRIC CHLORIDE   | -                                                                                                                                          | LC50: =20.26mg/L (96h, <i>Lepomis macrochirus</i> )<br>LC50: 20.95 - 22.56mg/L (96h, <i>Pimephales promelas</i> )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | -                          | EC50: =27.9mg/L (48h, <i>Daphnia magna</i> )<br>EC50: =9.6mg/L (48h, <i>Daphnia magna</i> )  |
| NICKEL DICHLORIDE | EC50: =0.66mg/L (72h, <i>Pseudokirchneriella subcapitata</i> )<br>EC50: 0.0063 - 0.0125mg/L (96h, <i>Pseudokirchneriella subcapitata</i> ) | LC50: >100mg/L (96h, <i>Brachydanio rerio</i> )<br>LC50: =1.3mg/L (96h, <i>Cyprinus carpio</i> )<br>LC50: =6.9mg/L (96h, <i>Cyprinus carpio</i> )<br>LC50: 18.1 - 25.5mg/L (96h, <i>Lepomis macrochirus</i> )<br>LC50: 2.02 - 6.88mg/L (96h, <i>Lepomis macrochirus</i> )<br>LC50: 6.7 - 9.7mg/L (96h, <i>Oncorhynchus mykiss</i> )<br>LC50: 6.63 - 9.15mg/L (96h, <i>Oncorhynchus mykiss</i> )<br>LC50: 1.9 - 4mg/L (96h, <i>Pimephales promelas</i> )<br>LC50: 2.02 - 6.88mg/L (96h, <i>Pimephales promelas</i> )<br>LC50: =25mg/L (96h, <i>Pimephales promelas</i> )<br>LC50: =9.65mg/L (96h, <i>Poecilia reticulata</i> )<br>LC50: 29.76 - 43.57mg/L (96h, <i>Poecilia reticulata</i> )<br>LC50: 2.83 - 5.99mg/L (96h, <i>Poecilia reticulata</i> ) | -                          | EC50: =6.68mg/L (48h, <i>Daphnia magna</i> )<br>EC50: =0.51mg/L (48h, <i>Daphnia magna</i> ) |

**12.2. Persistence and degradability****Persistence and degradability**

The product contains inorganic substances which are not biodegradable.

**12.3. Bioaccumulative potential****Bioaccumulation**

inorganic compound.

**Component Information**

| Chemical name   | Partition coefficient |
|-----------------|-----------------------|
| FERRIC CHLORIDE | -4                    |

**12.4. Mobility in soil**

Mobility in soil completely soluble.

### 12.5. Results of PBT and vPvB assessment

**PBT and vPvB assessment** The product does not contain any substance(s) classified as PBT or vPvB.

| Chemical name                       | PBT and vPvB assessment         |
|-------------------------------------|---------------------------------|
| IRON DICHLORIDE                     | The substance is not PBT / vPvB |
| FERRIC CHLORIDE                     | The substance is not PBT / vPvB |
| MANGANESE(II) CHLORIDE TETRAHYDRATE | The substance is not PBT / vPvB |
| NICKEL DICHLORIDE                   | PBT assessment does not apply   |

### 12.6. Other adverse effects

No information available.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

**Waste from residues/unused products** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging** Do not reuse empty containers.

## SECTION 14: Transport information

### IATA

|                                   |                                                                                |
|-----------------------------------|--------------------------------------------------------------------------------|
| 14.1 UN number or ID number       | UN3264                                                                         |
| 14.2 UN proper shipping name      | CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (IRON DICHLORIDE, FERRIC CHLORIDE) |
| 14.3 Transport hazard class(es)   | 8                                                                              |
| 14.4 Packing group                | III                                                                            |
| 14.5 Environmental hazards        | No                                                                             |
| 14.6 Special precautions for user |                                                                                |
| Special Provisions                | A3, A803                                                                       |
| ERG Code                          | 8L                                                                             |

### IMDG

|                                                              |                                                                                |
|--------------------------------------------------------------|--------------------------------------------------------------------------------|
| 14.1 UN number or ID number                                  | UN3264                                                                         |
| UN proper shipping name                                      | CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (IRON DICHLORIDE, FERRIC CHLORIDE) |
| 14.3 Transport hazard class(es)                              | 8                                                                              |
| 14.4 Packing group                                           | III                                                                            |
| 14.5 Environmental hazards                                   | No                                                                             |
| 14.6 Special precautions for user                            |                                                                                |
| Special Provisions                                           | 223, 274                                                                       |
| EmS-No                                                       | F-A, S-B                                                                       |
| 14.7 Maritime transport in bulk according to IMO instruments | No information available                                                       |

### RID

|                                 |                                                                                |
|---------------------------------|--------------------------------------------------------------------------------|
| 14.1 UN number or ID number     | UN3264                                                                         |
| 14.2 UN proper shipping name    | CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (IRON DICHLORIDE, FERRIC CHLORIDE) |
| 14.3 Transport hazard class(es) | 8                                                                              |

|                                   |     |
|-----------------------------------|-----|
| 14.4 Packing group                | III |
| 14.5 Environmental hazards        | No  |
| 14.6 Special precautions for user |     |
| Special Provisions                | 274 |
| Classification code               | C1  |

**ADR**

|                                   |                                                                                |
|-----------------------------------|--------------------------------------------------------------------------------|
| 14.1 UN number or ID number       | UN3264                                                                         |
| 14.2 UN proper shipping name      | CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (IRON DICHLORIDE, FERRIC CHLORIDE) |
| 14.3 Transport hazard class(es)   | 8                                                                              |
| 14.4 Packing group                | III                                                                            |
| 14.5 Environmental hazards        | No                                                                             |
| 14.6 Special precautions for user |                                                                                |
| Special Provisions                | 274                                                                            |
| Classification code               | C1                                                                             |
| Tunnel restriction code           | (E)                                                                            |

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations****Authorisations and/or restrictions on use:**

This product contains one or more substances subject to restriction (UK REACH - Annex XVII).

This product does not contain substances subject to authorisation (UK REACH - Annex XIV).

| Chemical name                 | Restricted substance per REACH Annex XVII                                                                                    | Substance subject to authorisation per REACH Annex XIV |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| NICKEL DICHLORIDE - 7718-54-9 | Use restricted. See item 28.<br>Use restricted. See item 30.<br>Restricted Carcinogen 1A<br>Restricted Reproductive Toxin 1B | -                                                      |

**Persistent Organic Pollutants**

Not applicable

**Export Notification requirements**

Not applicable

**Named dangerous substances per COMAH Regulations 2015 (as amended)**

Not applicable

**The Ozone-Depleting Substances Regulations 2015**

Not applicable

**The Biocidal Products Regulations 2001 (as amended)**

Not applicable

**The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (as amended)**

Not applicable

**Poisons Act 1972 (Explosive Precursors) Regulations (as Amended)**

Not applicable

**International Inventories**

TSCA

Contact supplier for inventory compliance status

DSL/NDL

Contact supplier for inventory compliance status

|               |                                                  |
|---------------|--------------------------------------------------|
| EINECS/ELINCS | Contact supplier for inventory compliance status |
| ENCS          | Contact supplier for inventory compliance status |
| IECSC         | Contact supplier for inventory compliance status |
| KECI          | Contact supplier for inventory compliance status |
| PICCS         | Contact supplier for inventory compliance status |
| AIIC          | Contact supplier for inventory compliance status |
| NZIoC         | Contact supplier for inventory compliance status |

**Legend:**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List  
**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
**ENCS** - Japan Existing and New Chemical Substances  
**IECSC** - China Inventory of Existing Chemical Substances  
**KECL** - Korean Existing and Evaluated Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**AIIC** - Australian Inventory of Industrial Chemicals  
**NZIoC** - New Zealand Inventory of Chemicals

**15.2. Chemical safety assessment**

**Chemical Safety Report** No information available

**SECTION 16: Other information****Key or legend to abbreviations and acronyms used in the safety data sheet****Full text of H-Statements referred to under section 3**

H301 - Toxic if swallowed  
 H315 - Causes skin irritation  
 H317 - May cause an allergic skin reaction  
 H331 - Toxic if inhaled  
 H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled  
 H341 - Suspected of causing genetic defects  
 H350i - May cause cancer by inhalation  
 H360D - May damage the unborn child  
 H372 - Causes damage to organs through prolonged or repeated exposure  
 H400 - Very toxic to aquatic life  
 H410 - Very toxic to aquatic life with long lasting effects

**Legend**

SVHC: Substances of Very High Concern for Authorisation:

**Legend Section 8: Exposure controls/personal protection**

|         |                             |      |                                  |
|---------|-----------------------------|------|----------------------------------|
| TWA     | TWA (time-weighted average) | STEL | STEL (Short Term Exposure Limit) |
| Ceiling | Maximum limit value         | *    | Skin designation                 |
| +       | Sensitisers                 |      |                                  |

Revision Note \*\*\*Indicates updated data since last publication

**Classification procedure**

|                                                                 |                    |
|-----------------------------------------------------------------|--------------------|
| Classification according to Regulation (EC) No. 1272/2008 [CLP] | Method Used        |
| Acute oral toxicity                                             | Calculation method |
| Acute dermal toxicity                                           | Calculation method |
| Acute inhalation toxicity - gas                                 | Calculation method |
| Acute inhalation toxicity - vapour                              | Calculation method |
| Acute inhalation toxicity - dust/mist                           | Calculation method |
| Skin corrosion/irritation                                       | Calculation method |
| Serious eye damage/eye irritation                               | Calculation method |
| Respiratory sensitisation                                       | Calculation method |

|                          |                    |
|--------------------------|--------------------|
| Skin sensitisation       | Calculation method |
| Mutagenicity             | Calculation method |
| Carcinogenicity          | Calculation method |
| Reproductive toxicity    | Calculation method |
| STOT - single exposure   | Calculation method |
| STOT - repeated exposure | Calculation method |
| Acute aquatic toxicity   | Calculation method |
| Chronic aquatic toxicity | Calculation method |
| Aspiration hazard        | Calculation method |
| Ozone                    | Calculation method |

**Key literature references and sources for data used to compile the SDS**

Agency for Toxic Substances and Disease Registry (ATSDR)  
U.S. Environmental Protection Agency ChemView Database  
European Food Safety Authority (EFSA)  
European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA\_RAC)  
European Chemicals Agency (ECHA) (ECHA\_API)  
Environmental Protection Agency  
Acute Exposure Guideline Level(s) (AEGl(s))  
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
U.S. Environmental Protection Agency High Production Volume Chemicals  
Food Research Journal  
Hazardous Substance Database  
International Uniform Chemical Information Database (IUCLID)  
National Institute of Technology and Evaluation (NITE)  
Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
NIOSH (National Institute for Occupational Safety and Health)  
National Library of Medicine's ChemID Plus (NLM CIP)  
National Library of Medicine's PubMed database (NLM PUBMED)  
U.S. National Toxicology Program (NTP)  
New Zealand's Chemical Classification and Information Database (CCID)  
Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications  
Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme  
Organisation for Economic Co-operation and Development Screening Information Data Set  
World Health Organization

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**This material safety data sheet complies with the requirements of UK REACH Regulations (SI 2019/758 as amended)  
Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work**

**Disclaimer**

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**End of Safety Data Sheet**