

**Iron(III) chloride solution****12322-2.5L**

Version 1.1

Revision Date 12/07/2021

Print Date 05/29/2023

**SECTION 1. IDENTIFICATION**

Product name : Iron(III) chloride solution

Number : 000000018714

Product Use Description : Laboratory chemicals

Manufacturer or supplier's details : Honeywell Specialty Chemicals Seelze GmbH  
Wunstorfer Straße 40  
Seelze, 30926

For more information call : 1-800-368-0050  
+1-231-726-3171(Monday-Friday, 9:00am-5:00pm)

In case of emergency call : **Medical: 1-800-498-5701 or +1-303-389-1414**  
: **Transportation (CHEMTREC): 1-800-424-9300 or**  
: **+1-703-527-3887**  
:  
: (24 hours/day, 7 days/week)

**SECTION 2. HAZARDS IDENTIFICATION****Emergency Overview**

Form : liquid

Color : tan

Odor : stinging

**Classification of the substance or mixture**

Classification of the substance or mixture : Corrosive to metals, Category 1  
Acute toxicity, Category 4, Oral  
Skin irritation, Category 2  
Serious eye damage, Category 1

**Iron(III) chloride solution****12322-2.5L**

Version 1.1

Revision Date 12/07/2021

Print Date 05/29/2023

**GHS Label elements, including precautionary statements**

Symbol(s)

:



Signal word

:

Danger

Hazard statements

:

May be corrosive to metals.  
Harmful if swallowed.  
Causes skin irritation.  
Causes serious eye damage.

Precautionary statements

:

**Prevention:**

Keep only in original container.  
Wash skin thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Wear protective gloves/protective clothing/eye protection/face protection.

**Response:**

IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.  
IF ON SKIN: Wash with plenty of soap and water.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
Immediately call a POISON CENTER/ doctor.  
If skin irritation occurs: Get medical advice/ attention.  
Take off contaminated clothing and wash before reuse.  
Absorb spillage to prevent material damage.

**Storage:**

Store in corrosive resistant container with a resistant inner liner.

**Disposal:**

Dispose of contents/ container to an approved waste disposal plant.

**Carcinogenicity**

**Iron(III) chloride solution****12322-2.5L**

Version 1.1

Revision Date 12/07/2021

Print Date 05/29/2023

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP, IARC, or OSHA.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**Formula :  $\text{Cl}_3\text{Fe}$ 

Chemical nature : Mixture

| Chemical name    | CAS-No.   | Concentration              |
|------------------|-----------|----------------------------|
| Water            | 7732-18-5 | $\geq 40.00$ - $< 60.00$ % |
| Iron trichloride | 7705-08-0 | $\geq 40.00$ - $< 60.00$ % |

**SECTION 4. FIRST AID MEASURES**

- General advice : First aider needs to protect himself. Move out of dangerous area. Take off all contaminated clothing immediately.
- Inhalation : If breathed in, move person into fresh air. If symptoms persist, call a physician.
- Skin contact : After contact with skin, wash immediately with plenty of water. If symptoms persist, call a physician.
- Eye contact : Rinse thoroughly with plenty of water, also under the eyelids. Protect unharmed eye. Call a physician immediately.
- Ingestion : When swallowed, allow water to be drunk. Rinse mouth. Call a physician immediately.

**Notes to physician**

- Most important symptoms/effects, acute and delayed : No information available.
- Indication of immediate medical attention and : Treat symptomatically.

**Iron(III) chloride solution****12322-2.5L**

Version 1.1

Revision Date 12/07/2021

Print Date 05/29/2023

special treatment needed, if  
necessary

**SECTION 5. FIREFIGHTING MEASURES**

- Suitable extinguishing media : Water spray  
Foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry powder
- Specific hazards during firefighting : Fire may cause evolution of:  
Metal oxides  
Hydrogen chloride gas
- Special protective equipment for firefighters : Wear an approved positive pressure self-contained breathing apparatus in addition to standard fire fighting gear.
- Further information : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

- Personal precautions, protective equipment and emergency procedures : Evacuate personnel to safe areas.  
Wear personal protective equipment. Unprotected persons must be kept away.  
Ensure adequate ventilation.  
Avoid breathing dust or spray mist.  
Avoid contact with skin, eyes and clothing.
- Environmental precautions : Do not flush into surface water or sanitary sewer system.  
Prevent further leakage or spillage if safe to do so.
- Methods and materials for containment and cleaning up : Use mechanical handling equipment.  
Soak up with inert absorbent material.  
Sweep up and shovel into suitable containers for disposal.  
Dispose of in accordance with local regulations.

**SECTION 7. HANDLING AND STORAGE****Handling**

**Iron(III) chloride solution****12322-2.5L**

Version 1.1

Revision Date 12/07/2021

Print Date 05/29/2023

Precautions for safe handling : Wear personal protective equipment.  
Use only in well-ventilated areas.  
Avoid inhalation, ingestion and contact with skin and eyes.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

**Storage**

Conditions for safe storage, including any incompatibilities : Store in original container.  
Keep containers tightly closed in a dry, cool and well-ventilated place.

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Protective measures : Ensure that eyewash stations and safety showers are close to the workstation location.  
Legal requirements are to be considered in regard of the selection, use and care of personal protective equipment.  
Avoid breathing dust or spray mist.  
Avoid contact with skin, eyes and clothing.

Engineering measures : Use with local exhaust ventilation.

Eye protection : Safety goggles

Hand protection : Latex gloves  
Gloves must be inspected prior to use.  
Replace when worn.

Skin and body protection : Protective suit

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.

Hygiene measures : Remove and wash contaminated clothing before re-use.  
Wash hands before breaks and at the end of workday.  
When using do not eat or drink.

**Exposure Guidelines**

| Components | CAS-No. | Value | Control parameters | Update | Basis |
|------------|---------|-------|--------------------|--------|-------|
|------------|---------|-------|--------------------|--------|-------|

## SAFETY DATA SHEET

**Iron(III) chloride solution****12322-2.5L**

Version 1.1

Revision Date 12/07/2021

Print Date 05/29/2023

|                        |           |                                                         |         |      |                                                                                 |
|------------------------|-----------|---------------------------------------------------------|---------|------|---------------------------------------------------------------------------------|
| Iron trichloride       | 7705-08-0 | TWA :<br>Time<br>weighted<br>average                    | 1 mg/m3 | 2008 | ACGIH:US. ACGIH<br>Threshold Limit<br>Values, as amended                        |
| Further<br>information | :         | Expressed as : as Fe                                    |         |      |                                                                                 |
| Iron trichloride       | 7705-08-0 | REL :<br>Recomm<br>ended<br>exposure<br>limit<br>(REL): | 1 mg/m3 | 2005 | NIOSH/GUIDE:US.<br>NIOSH: Pocket<br>Guide to Chemical<br>Hazards, as<br>amended |
| Further<br>information | :         | Expressed as : as Fe                                    |         |      |                                                                                 |
| Iron trichloride       | 7705-08-0 | TWA :<br>Time<br>weighted<br>average                    | 1 mg/m3 | 1989 | Z1A:US. OSHA<br>Table Z-1-A (29<br>CFR 1910.1000), as<br>amended                |
| Further<br>information | :         | Expressed as : as Fe                                    |         |      |                                                                                 |

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

|                             |                           |
|-----------------------------|---------------------------|
| Physical state              | : liquid                  |
| Color                       | : tan                     |
| Odor                        | : stinging                |
| Odor threshold              | : Note: No data available |
| pH                          | : Note: acidic            |
| Melting point/range         | : Note: No data available |
| Boiling point/boiling range | : Note: No data available |

**Iron(III) chloride solution****12322-2.5L**

Version 1.1

Revision Date 12/07/2021

Print Date 05/29/2023

|                           |                                                            |
|---------------------------|------------------------------------------------------------|
| Flash point               | : Note: Not applicable                                     |
| Evaporation rate          | : Note: No data available                                  |
| Flammability              | : No data available                                        |
| Lower explosion limit     | : Note: Not applicable                                     |
| Upper explosion limit     | : Note: Not applicable                                     |
| Vapor pressure            | : Note: No data available                                  |
| Vapor density             | : Note: No data available                                  |
| Density                   | : ca. 1.48 g/cm <sup>3</sup> at 20 °C                      |
| Water solubility          | : Note: completely miscible                                |
| Ignition temperature      | : Note: Not applicable                                     |
| Decomposition temperature | : Note: No decomposition if used as directed.              |
| Viscosity, dynamic        | : Note: No data available                                  |
| Viscosity, kinematic      | : Note: No data available                                  |
| Oxidizing properties      | : The substance or mixture is not classified as oxidizing. |
| Molecular weight          | : 162.2 g/mol                                              |
| Corrosivity               | : Note: Corrosive to metals                                |

**Iron(III) chloride solution****12322-2.5L**

Version 1.1

Revision Date 12/07/2021

Print Date 05/29/2023

**SECTION 10. STABILITY AND REACTIVITY**

|                                    |                                                     |
|------------------------------------|-----------------------------------------------------|
| Reactivity                         | : Not classified as a reactivity hazard.            |
| Chemical stability                 | : Stable under recommended storage conditions.      |
| Possibility of hazardous reactions | : Hazardous polymerisation does not occur.          |
| Conditions to avoid                | : Protect from heat/overheating.                    |
| Incompatible materials             | : Strong oxidizing agents<br>Strong bases<br>Metals |
| Hazardous decomposition products   | : Hydrogen chloride<br>Chlorine                     |

**SECTION 11. TOXICOLOGICAL INFORMATION**

|                           |                                                                                                   |
|---------------------------|---------------------------------------------------------------------------------------------------|
| Acute oral toxicity       | : LD50: 1,300 mg/kg<br>Species: Mouse<br>Test substance: anhydrous substance                      |
| Acute inhalation toxicity | : Note: Not classified due to data which are conclusive although insufficient for classification. |
| Acute dermal toxicity     | : Note: Not classified due to data which are conclusive although insufficient for classification. |
| Skin irritation           | : Note: Conclusive and supporting classification (Ref: REACH Dossier - ECHA disseminated data)    |

**Iron(III) chloride solution****12322-2.5L**

Version 1.1

Revision Date 12/07/2021

Print Date 05/29/2023

|                       |                                                                                                   |
|-----------------------|---------------------------------------------------------------------------------------------------|
| Eye irritation        | : Note: Conclusive and supporting classification (Ref: REACH Dossier - ECHA disseminated data)    |
| Sensitisation         | : Note: Not classified due to data which are conclusive although insufficient for classification. |
| Genotoxicity in vitro | : Note: Not classified due to data which are conclusive although insufficient for classification. |

**SECTION 12. ECOLOGICAL INFORMATION****Ecotoxicity effects**

|                                                     |                                                                                                   |
|-----------------------------------------------------|---------------------------------------------------------------------------------------------------|
| Toxicity to fish                                    | : Note: No data available                                                                         |
| Toxicity to daphnia and other aquatic invertebrates | : Note: Not classified due to data which are conclusive although insufficient for classification. |
| Toxicity to algae                                   | : Note: No data available                                                                         |

**Elimination information (persistence and degradability)**

|                  |                                                                                                  |
|------------------|--------------------------------------------------------------------------------------------------|
| Biodegradability | : Note: The methods for determining biodegradability are not applicable to inorganic substances. |
|------------------|--------------------------------------------------------------------------------------------------|

**Further information on ecology****SECTION 13. DISPOSAL CONSIDERATIONS**

|                  |                                                                    |
|------------------|--------------------------------------------------------------------|
| Disposal methods | : Observe all Federal, State, and Local Environmental regulations. |
|------------------|--------------------------------------------------------------------|

**SECTION 14. TRANSPORT INFORMATION**

**Iron(III) chloride solution****12322-2.5L**

Version 1.1

Revision Date 12/07/2021

Print Date 05/29/2023

**DOT** UN/ID No. : UN 2582  
Proper shipping name : FERRIC CHLORIDE SOLUTION  
Class : 8  
Packing group : III  
Hazard Labels : 8

**IATA** UN/ID No. : UN 2582  
Description of the goods : FERRIC CHLORIDE SOLUTION  
Class : 8  
Packaging group : III  
Hazard Labels : 8  
Packing instruction (cargo aircraft) : 856  
Packing instruction (passenger aircraft) : 852  
Packing instruction (passenger aircraft) : Y841

**IMDG** UN/ID No. : UN 2582  
Description of the goods : FERRIC CHLORIDE SOLUTION  
Class : 8  
Packaging group : III  
Hazard Labels : 8  
EmS Number : F-A, S-B  
Marine pollutant : no  
IMDG Code segregation group 1 – ACIDS,

**SECTION 15. REGULATORY INFORMATION****Inventories**

US. Toxic Substances : On TSCA Inventory  
Control Act

Australia. Industrial : On the inventory, or in compliance with the inventory  
Chemicals Act (AIC), as  
amended

Canada. Canadian : All components of this product are on the Canadian DSL  
Environmental Protection  
Act (CEPA). Domestic  
Substances List (DSL)

**Iron(III) chloride solution****12322-2.5L**

Version 1.1

Revision Date 12/07/2021

Print Date 05/29/2023

Japan. Kashin-Hou Law List : On the inventory, or in compliance with the inventory

Korea. Existing Chemicals Inventory (KECI) : On the inventory, or in compliance with the inventory

Philippines. Inventory of Chemicals and Chemical Substances (PICCS) : On the inventory, or in compliance with the inventory

China. Inventory of Existing Chemical Substances (IECSC) : On the inventory, or in compliance with the inventory

New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand : On the inventory, or in compliance with the inventory

**National regulatory information**

US. EPA CERCLA Hazardous Substances (40 CFR 302) : The following component(s) of this product is/are subject to release reporting under 40 CFR 302 when release exceeds the Reportable Quantity (RQ):

Reportable quantity: 1000 lbs  
: Iron trichloride 7705-08-0**SARA 302 Components** : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.**SARA 313 Components** : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.**SARA 311/312 Hazards** : Acute Health Hazard**CERCLA Reportable Quantity** : 2000 lbs

**Iron(III) chloride solution****12322-2.5L**

Version 1.1

Revision Date 12/07/2021

Print Date 05/29/2023

**California Prop. 65** : This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

**Massachusetts RTK** : Iron trichloride 7705-08-0

**New Jersey RTK** : Iron trichloride 7705-08-0

**Pennsylvania RTK** : Iron trichloride 7705-08-0

**SECTION 16. OTHER INFORMATION**

|                 | <b>HMIS III</b> | <b>NFPA</b> |
|-----------------|-----------------|-------------|
| Health hazard   | : 2             | 2           |
| Flammability    | : 0             | 0           |
| Physical Hazard | : 0             |             |
| Instability     | :               | 0           |

Hazard rating and rating systems (e.g. HMIS® III, NFPA): This information is intended solely for the use of individuals trained in the particular system.

**Further information**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Final determination of suitability of any material is the sole responsibility of the user. This information should not constitute a guarantee for any specific product properties.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

Previous Issue Date: 12/21/2016

Prepared by Honeywell Performance Materials and Technologies Product Stewardship Group