An ISO 9001 : 2015 & GMP Certified Company 101, Aarkay Ruby Industrial Estate (1B), Opp Shree Narayan Industrial Estate, Chinchpada, Vasai East, Waliv, Maharashtra 401208. Tel : + 91 98200 41841 Email : <u>info@ottokemi.com</u> Web : <u>www.ottokemi.com</u>

MATERIAL SAFETY DATA SHEET (MSDS)

SECTION 1. Product identifiers

Product name: Ferric chloride anhydrous powder, ≥99.99% trace metals basis Product Code: F 0934 CAS No : 7705-08-0

1.2. Relevant identified uses of the substance or mixture and uses advised against Use : Industrial. For professional use only.

1.3. Details of the supplier of the safety data sheet
Company identification
OTTO CHEMIE PVT LTD
101, Aarkay Ruby Industrial Estate(1B), Opp Shree Narayan Industrial Estate, Chinchpada, Vasai East, Waliv, Maharashtra 401208.
Email <u>info@ottokemi.com</u>

1.4. Emergency telephone number Phone no. : + 91 22 2207 0099 (9:00am - 6:00 pm)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture Corrosive to Metals, (Category 1) Acute toxicity, (Category 4) Skin irritation, (Category 2) Serious eye damage, (Category 1) 2.2 Label elements Labelling according Regulation (EC) No 1272/2008 Pictogram Signal Word Hazard Statements H290 H302 H315 H318 **Precautionary Statements** P234 P264 P280 P301 + P312 P302 + P352 P305 + P351 + P338

Supplemental Hazard Statements Reduced Labeling (<= 125 ml) Pictogram Signal Word Hazard Statements H318 Precautionary Statements P305 + P351 + P338

Supplemental Hazard Statements 2.3 Other hazards H290: May be corrosive to metals. H302: Harmful if swallowed. H315: Causes skin irritation. H318: Causes serious eye damage.

Danger

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

Keep only in original packaging. Wash skin thoroughly after handling. Wear protective gloves/ eye protection/ face protection. IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. IF ON SKIN: Wash with plenty of water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue

Remove contact lenses, if present and easy to do. Continue rinsing. none

Danger

Causes serious eye damage.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. none

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This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. Toxicological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 SubstancesSynonymsFormulaCI3FeMolecular weightCAS-No.EC-No.: 231-729-4

Component	Classification	Concentration
iron(III) chloride		
CAS-No. 7705-08-0 EC-No. 231-729-4	Met. Corr. 1; Acute Tox. 4; Skin Irrit. 2; Eye Dam. 1; H290, H302, H315, H318 Concentration limits: >= 1 %: Met. Corr. 1, H290;	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

Show this material safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with

water/ shower.

In case of eye contact

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist.

Remove contact lenses.

If swallowed

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section

2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media
For this substance/mixture no limitations of extinguishing agents are given.
5.2 Special hazards arising from the substance or mixture
Hydrogen chloride gas
Iron oxides
Not combustible.

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Ambient fire may liberate hazardous vapours.

5.3 Advice for firefighters
Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.
5.4 Further information
Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8. 6.2 Environmental precautions Do not let product enter drains. 6.3 Methods and materials for containment and cleaning up Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts. 6.4 Reference to other sections For disposal see section 13. **SECTION 7: Handling and storage** 7.1 Precautions for safe handling For precautions see section 2.2. 7.2 Conditions for safe storage, including any incompatibilities Storage conditions Store under inert gas. No metal containers. Tightly closed. Dry. hygroscopic Storage class Storage class (TRGS 510): 8B: Non-combustible, corrosive hazardous materials 7.3 Specific end use(s) Apart from the uses mentioned in section 1.2 no other specific uses are stipulated SECTION 8: Exposure controls/personal protection 8.1 Control parameters

Ingredients with workplace control parameters

8.2 Exposure controls Personal protective equipment

Eve/face protection

Eye/lace protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles

Skin protection

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 480 min

Material tested:KCL 741 Dermatril® L

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

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Splash contact Material: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: 480 min Material tested:KCL 741 Dermatril® L Body Protection protective clothing Respiratory protection Recommended Filter type: Filter B-(P2) The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented. Control of environmental exposure Do not let product enter drains. **SECTION 9: Physical and chemical properties** 9.1 Information on basic physical and chemical properties a) Physical state solid b) Color dark, brown, to, black c) Odor pungent d) Melting Melting point: 306 °C - (ECHA) point/freezing point e) Initial boiling point Decomposes below the boiling point. and boiling range f) Flammability (solid, does not ignite - A.10. (Regulation (EC) No 440/2008, Annex A) gas) g) Upper/lower No data available flammability or explosive limits h) Flash point Not applicable i) Autoignition No data available temperature 316 °C j) Decomposition temperature k) pH No data available I) Viscosity Viscosity, kinematic: No data available Viscosity, dynamic: No data available m) Water solubility soluble n) Partition coefficient: Not applicable for inorganic substances n-octanol/water o) Vapor pressure < 1 hPa at 20 °C 2,800 g/cm3 at 25 °C p) Density Relative density 2,89 at 25 °C q) Relative vapor 5,60 - (Air = 1.0)density r) Particle No data available characteristics s) Explosive properties Not classified as explosive. t) Oxidizing properties none 9.2 Other safety information 5,60 - (Air = 1.0)Relative vapor density **SECTION 10: Stability and reactivity** 10.1 Reactivity No data available 10.2 Chemical stability The product is chemically stable under standard ambient conditions (room temperature). 10.3 Possibility of hazardous reactions Risk of explosion with: Alkali metals

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Ethylene oxide Violent reactions possible with: Aluminum with Heat. Copper metals Light metals Generates dangerous gases or fumes in contact with: Water 10.4 Conditions to avoid no information available 10.5 Incompatible materials No data available 10.6 Hazardous decomposition products In the event of fire: see section 5 **SECTION 11: Toxicological information** 11.1 Information on toxicological effects Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Toxicity to Animals: Oral LD50 Rat: 1500 mg/kg; Dermal LD50 Rabbit: 2000mg/kg Inhalation LC50 Rat: > 50mg/L. Chronic Effects on Humans: CARCINOGENIC EFFECTS: Classified None. by NTP, None. by OSHA, None. by NIOSH. Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant), of inhalation (lung irritant). Special Remarks on Toxicity to Animals: Not available. Special Remarks on Chronic Effects on Humans: Not available. Special Remarks on other Toxic Effects on Humans: Not available. **SECTION 12: Ecological information** 12.1 Toxicity Toxicity to daphnia and other aquatic invertebrates Immobilization EC50 - Daphnia magna (Water flea) - 9,6 mg/l - 48 h (OECD Test Guideline 202) 12.2 Persistence and degradability Biodegradability Result: - Readily biodegradable. 12.3 Bioaccumulative potential No data available 12.4 Mobility in soil No data available 12.5 Results of PBT and vPvB assessment This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher. 12.6 Endocrine disrupting properties Product: Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. 12.7 Other adverse effects No data available **SECTION 13: Disposal considerations**

13.1 Waste treatment methods No data available

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SECTION 14: Transport information

14.1 UN number			
ADR/RID: 1773		IMDG: 1773	IATA: 1773
14.2 UN proper shipping na	ime		
ADR/RID : FERF	RIC CHLORIDE, ANHYDROUS		
IMDG : FERF	RIC CHLORIDE, ANHYDROUS		
IATA : Ferric	chloride, anhydrous		
14.3 Transport hazard class	s(es)		
ADR/RID: 8		IMDG: 8	IATA: 8
14.4 Packaging group			
ADR/RID: III		IMDG: III	IATA: III
14.5 Environmental hazard	S		
ADR/RID: yes		IMDG Marine pollutant: yes	IATA: no
14.6 Special precautions fo	r user		
Tunnel restriction code	: (E)		
Further information	: No data available		

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006. Other regulations Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable. Take note of Dir 94/33/EC on the protection of young people at work. 15.2 Chemical Safety Assessment For this product a chemical safety assessment was not carried out

SECTION 16: Other Information

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.

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