SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

FERRIC CHLORIDE SOLUTION >=10%

Version 5.0 Print Date 2013/06/11

Revision date / valid from 2013/06/11 **MSDS code: MFIC010**

Section 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name	:	FERRIC CHLORIDE SOLUTION >=10%
Substance name	:	Iron trichloride
CAS-No.	:	7705-08-0
EC-No.	:	231-729-4

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

Use of the Substance/Mixture	:	At this time we do not yet have information on identified uses. They will be included in this safety data sheet when available.
Uses advised against	:	At this moment we have not identified any uses advised against

1.3. Details of the supplier of the safety data sheet

Company	:	Brenntag UK & Ireland Albion House, Rawdon Park GB LS19 7XX Leeds Yeadon
Telephone	:	+44 (0) 113 3879 200
Telefax	:	+44 (0) 113 3879 280
E-mail address	:	msds@brenntag.co.uk

1.4. Emergency telephone number

Emergency telephone number	:	Emergency only telephone number (open 24 hours): +44 (0) 1865 407333 (N.C.E.C. Culham)

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

REGULATION (EC) No 1272/2008			
Hazard class	**Hazard category**	**Target Organs**	**Hazard statements**
Acute toxicity (Oral)	Category 4	---	H302
Skin irritation	Category 2	---	H315
Serious eye damage	Category 1	---	H318

Corrosive to metals	Category 1	---	H290

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

Classification according to EU Directives 67/548/EEC or 1999/45/EC

Directive 67/548/EEC or 1999/45/EC	
Hazard symbol / Category of danger	**Risk phrases**
Harmful (Xn)	R22
Irritant (Xi)	R38
Irritant (Xi)	R41

For the full text of the R-phrases mentioned in this Section, see Section 16.

Most important adverse effects

Human Health : See section 11 for toxicological information.

Physical and chemical hazards : See section 9 for physicochemical information.

Potential environmental effects : See section 12 for environmental information.

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008

Hazard symbols :

Signal word : Danger

Hazard statements :

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.

Precautionary statements

Prevention :

P234	Keep only in original container.
P280	Wear protective gloves/ eye protection/ face protection.

Response :

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or

		P390	doctor/ physician. Absorb spillage to prevent material damage.
Disposal	:	P501	Dispose of contents/ container to an approved waste disposal plant.

Hazardous components which must be listed on the label:

- Iron trichloride

2.3. Other hazards

For Results of PBT and vPvB assessment see section 12.5.

Section 3: Composition/information on ingredients

3.1. Substances

Hazardous components	Amount [%]	Classification (REGULATION (EC) No 1272/2008)		Classification (67/548/EEC)
		Hazard class / Hazard category	Hazard statements	
Iron trichloride CAS-No. : 7705-08-0 EC-No. : 231-729-4 Registration : 01-2119497998-05-xxxx	>= 10	Acute Tox.4 Skin Irrit.2 Eye Dam.1 Met. Corr.1	H302 H315 H318 H290	Harmful; Xn; R22 Irritant; Xi; R38 Irritant; Xi; R41

For the full text of the R-phrases mentioned in this Section, see Section 16.
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 : Take off all contaminated clothing immediately.

If inhaled : Remove to fresh air. If symptoms call a physician. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position.

In case of skin contact : Wash off immediately with soap and plenty of water.

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 5 minutes. Consult an eye specialist immediately. Go to an ophthalmic hospital if possible.

If swallowed	: Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.

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

Symptoms	: See Section 11 for more detailed information on health effects and symptoms.
Effects	: See Section 11 for more detailed information on health effects and symptoms.

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

Treatment	: Treat symptomatically. No further information 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	:	High volume water jet

5.2. Special hazards arising from the substance or mixture

Specific hazards during firefighting	:	Incomplete combustion may form toxic pyrolysis products.

5.3. Advice for firefighters

Special protective equipment for firefighters	:	In the event of fire, wear self-contained breathing apparatus.Wear personal protective equipment.
Further information	:	Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	: Use personal protective equipment. Avoid contact with skin and eyes. Do not breathe vapours or spray mist. For personal protection see section 8.

6.2. Environmental precautions

Environmental precautions	:	Do not flush into surface water or sanitary sewer system.

6.3. Methods and materials for containment and cleaning up

Methods and materials for containment and cleaning	:	Use mechanical handling equipment. Keep in suitable, closed containers for disposal.

up

: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders). Keep in suitable, closed containers for disposal.

6.4. Reference to other sections

For personal protection see section 8.

Section 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling	:	Keep container tightly closed. Avoid formation of aerosol. Do not breathe vapours or spray mist. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Emergency eye wash fountains and emergency showers should be available in the immediate vicinity.
Hygiene measures	:	Keep away from food, drink and animal feedingstuffs. Smoking, eating and drinking should be prohibited in the application area. Wash hands before breaks and at the end of workday. Take off all contaminated clothing immediately. Provide adequate ventilation. Avoid contact with the skin and the eyes. Do not breathe vapours or spray mist.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	:	Keep only in the original container.
Advice on protection against fire and explosion	:	Normal measures for preventive fire protection.
Further information on storage conditions	:	Keep tightly closed in a dry and cool place. Keep away from heat.
Advice on common storage	:	Keep away from food, drink and animal feedingstuffs.

7.3. Specific end use(s)

Specific use(s)	:	No information available.

Section 8: Exposure controls/personal protection

8.1. Control parameters

Component:	**Iron trichloride**	**CAS-No.**
		7705-08-0

Other Occupational Exposure Limit Values

EH40 WEL, Time Weighted Average (TWA):, as Fe
1 mg/m3

EH40 WEL, Short Term Exposure Limit (STEL):, as Fe
2 mg/m3

ELV (IE), Short Term Exposure Limit (STEL):, as Fe
2 mg/m3

ELV (IE), Time Weighted Average (TWA):, as Fe
1 mg/m3

8.2. Exposure controls

Appropriate engineering controls
Refer to protective measures listed in sections 7 and 8.

Personal protective equipment
Respiratory protection

Advice	:	Required, if exposure limit is exceeded (e.g. OEL). When aerosol or mist is formed use suitable respiratory protection.

Hand protection

Advice	:	The glove material has to be impermeable and resistant to the product / the substance / the preparation. Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact). Protective gloves should be replaced at first signs of wear.

Eye protection

Advice	:	Goggles or faceshield giving complete protection to the eyes

Skin and body protection

Advice	:	Wear personal protective equipment.

Environmental exposure controls

General advice	:	Do not flush into surface water or sanitary sewer system.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Form	:	oily

Colour	:	dark brown
Odour	:	characteristic pungent
Odour Threshold	:	no data available
pH	:	acidic
Melting point/range	:	ca. -10 °C
Boiling point/boiling range	:	280 °C
Flash point	:	no data available
Evapouration rate	:	no data available
Flammability (solid, gas)	:	no data available
Upper explosion limit	:	no data available
Lower explosion limit	:	no data available
Vapour pressure	:	no data available
Relative vapour density	:	no data available
Relative density	:	no data available
Solubility/qualitative	:	completely soluble
Partition coefficient: n-octanol/water	:	no data available
Auto-ignition temperature	:	no data available
Thermal decomposition	:	no data available
Viscosity, kinematic	:	7.5 mm2/s (25 °C)
Explosivity	:	no data available
Oxidizing properties	:	no data available

9.2. Other information

No further information available.

Section 10: Stability and reactivity

10.1. Reactivity

Advice : No information available.

10.2. Chemical stability

Advice : Stable

10.3. Possibility of hazardous reactions

Hazardous reactions : No information available.

10.4. Conditions to avoid

Conditions to avoid : 0 °C

10.5. Incompatible materials

Materials to avoid : Acids, alkalis, Copper, silver, Zinc, Hydrogen peroxide, hypochlorites, Iron, Mild steel, Oxidizing agents, Strong bases

10.6. Hazardous decomposition products

Hazardous decomposition products : No information available.

Section 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity		
Oral		
LD50 Oral	:	1160 mg/kg (rat)
Inhalation		
		Irritating to respiratory system. Prolonged or repeated contact with vapour may cause chronic bronchitis and corrosive damages on teeth.
Irritation		
Skin		
Result	:	Causes skin irritation.
Eyes		
Result	:	Causes serious eye damage.
Sensitisation		
Result	:	No sensitizing effect known.

Section 12: Ecological information

12.1. Toxicity

Acute toxicity		
Fish		
LC50	:	75.6 mg/l (Gambusia affinis (Mosquito fish); 96 h) (Toxicity to fish)
Toxicity to daphnia and other aquatic invertebrates		
EC50	:	29 mg/l (Daphnia magna (Water flea); 48 h) (Toxicity to daphnia)

12.2. Persistence and degradability

12.3. Bioaccumulative potential

12.4. Mobility in soil

12.5. Results of PBT and vPvB assessment

12.6. Other adverse effects

Additional ecological information		
Result	:	Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration.

Section 13: Disposal considerations

13.1. Waste treatment methods

Product	:	Disposal together with normal waste is not allowed. Special disposal required according to local regulations. Do not let product enter drains. Contact waste disposal services.
Contaminated packaging	:	Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning. Packagings that cannot be cleaned are to be disposed of in the same manner as the product.
European Waste Catalogue Number	:	No waste code according to the European Waste Catalogue can be assigned for this product, as the intended use dictates the assignment. The waste code is established in consultation with the regional waste disposer.

Section 14: Transport information

14.1. UN number

2582

14.2. UN proper shipping name

ADR	:	FERRIC CHLORIDE SOLUTION
RID	:	FERRIC CHLORIDE SOLUTION
IMDG	:	FERRIC CHLORIDE SOLUTION

14.3. Transport hazard class(es)

ADR-Class	:	8
(Labels; Classification Code; Hazard identification No; Tunnel restriction code)		8; C1; 80; (E)
RID-Class	:	8
(Labels; Classification Code; Hazard identification No)		8; C1; 80
IMDG-Class	:	8
(Labels; EmS)		8; F-A, S-B

14.4. Packaging group

ADR	:	III
RID	:	III
IMDG	:	III

14.5. Environmental hazards

Labeling according to 5.2.1.8 ADR	:	no
Labeling according to 5.2.1.8 RID	:	no
Labeling according to 5.2.1.6.3 IMDG	:	no
Classification as environmentally hazardous according to 2.9.3 IMDG	:	no

14.6. Special precautions for user

Not applicable.

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

IMDG : Not applicable.

Section 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.2. Chemical Safety Assessment

no data available

Section 16: Other information

Full text of R-phrases referred to under sections 2 and 3.

R22	Harmful if swallowed.
R38	Irritating to skin.
R41	Risk of serious damage to eyes.

Full text of H-Statements referred to under sections 2 and 3.

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.

Further information

Other information	:	The information provided in this Safety Data Sheet is correct to our knowledge at the date of its revision. The information given only describes the products with regard to safety arrangements and is not to be considered as a warranty or quality specification and does not constitute a legal relationship. The information contained in this Safety Data Sheet relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text

|| Indicates updated section.