

TITANIUM III CHLORIDE, 20% IN 2M HYDROCHLORIC ACID

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830
Date of issue: 8/7/2008 Revision date: 1/21/2019 Supersedes: 10/3/2017 Version: 3.2

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

1.1. Product identifier

Product form : Mixture
Product name : TITANIUM III CHLORIDE, 20% IN 2M HYDROCHLORIC ACID
CAS-No. : 7705-07-9
Product code : 90023023
Synonyms : SP00385

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

1.2.1. Relevant identified uses

Industrial/Professional use spec : Industrial
For professional use only

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Scaffell Organics
Lingfield Way
Yarm Road Business Park
DL1 4XX Darlington - UK
T +44 (0) 1949 823777
info@scaffellorganics.com - www.scaffellorganics.com

1.4. Emergency telephone number

Emergency number : +44 7590 545705

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Skin corrosion/irritation, Category 1B H314
Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS05

Signal word (CLP) : Danger
Hazard statements (CLP) : H314 - Causes severe skin burns and eye damage.
Precautionary statements (CLP) : P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P311 - IF exposed or concerned: Call a POISON CENTER or doctor.

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Titanium (III) Chloride	(CAS-No.) 7705-07-9 (EC-No.) 231-728-9	15 - 25	Pyr. Sol. 1, H250 Skin Corr. 1B, H314

TITANIUM III CHLORIDE, 20% IN 2M HYDROCHLORIC ACID

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

HYDROGEN CHLORIDE	(CAS-No.) 7647-01-0 (EC-No.) 231-595-7 (EC Index-No.) 017-002-00-2	3.75 - 8.5	Press. Gas Acute Tox. 3 (Inhalation), H331 Skin Corr. 1A, H314
-------------------	--	------------	--

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: If possible show this sheet, if not available show packaging or label. Do not leave affected person unattended. Never give anything by mouth to an unconscious person.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Give oxygen or artificial respiration if necessary. Get immediate medical advice/attention.
First-aid measures after skin contact	: After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water. Do not remove clothing if it sticks to the skin. Seek medical attention if burns develop.
First-aid measures after eye contact	: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Remove contact lenses, if present and easy to do. Continue rinsing.
First-aid measures after ingestion	: Rinse mouth out with water. Get immediate medical advice/attention. Do not induce vomiting. Give water to drink if victim completely conscious/alert. Do not give an unconscious person anything to drink.

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

Symptoms/effects	: Causes severe skin burns and eye damage.
Symptoms/effects after inhalation	: Burns or irritation of the linings of the mouth, throat, and gastrointestinal tract. Inhalation may cause irritation (cough, short breathing, difficulty in breathing).
Symptoms/effects after skin contact	: Irritation (itching, redness, blistering). Causes severe burns.
Symptoms/effects after eye contact	: Causes eye irritation. redness, itching, tears. Direct contact may result in corneal injury.
Symptoms/effects after ingestion	: Symptoms of ingestion include drowsiness, weakness, headache, dizziness, nausea, vomiting. Burns or irritation of the linings of the mouth, throat, and gastrointestinal tract. Blood in vomit.

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

Get immediate medical advice/attention.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire	: When heated to decomposition, emits toxic fumes.
--	--

5.3. Advice for firefighters

Precautionary measures fire	: Exposure to fire/heat: seal off low-lying areas. Keep container tightly closed and away from heat, sparks and flame. Keep away from combustible materials.
Firefighting instructions	: Eliminate all ignition sources if safe to do so. Evacuate area. Warn all persons of corrosive and toxic hazard. Keep upwind.
Protection during firefighting	: Use self-contained breathing apparatus and chemically protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Do not handle until all safety precautions have been read and understood. Ventilate the area thoroughly, especially low lying areas (basements, workpits etc).
------------------	--

6.1.1. For non-emergency personnel

Protective equipment	: Wear recommended personal protective equipment.
Emergency procedures	: Do not touch or walk on the spilled product. Evacuate area. Mark out the contaminated area with signs and prevent access to unauthorized personnel. Do not breathe vapours. Do not get in eyes, on skin, or on clothing. Turn leaking containers leak-side up to prevent the escape of liquid.
Measures in case of dust release	: Shelter from vapours by keeping upwind.

6.1.2. For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. Use self-contained breathing apparatus and chemically protective clothing.
Emergency procedures	: Cover spill with non combustible material, e.g.: sand/earth. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous. Stop leak if safe to do so.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

TITANIUM III CHLORIDE, 20% IN 2M HYDROCHLORIC ACID

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid formation of vapours. Provide good ventilation in process area to prevent formation of vapour. Do not breathe vapours, mist, spray.

Hygiene measures : Take off immediately all contaminated clothing and wash it before reuse. Contaminated work clothing should not be allowed out of the workplace. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Ensure adequate ventilation, especially in confined areas.

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Direct sunlight, Heat sources.

Incompatible products : Strong oxidisers. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight.

Storage area : Store in a dry place. Store in a closed container.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

HYDROGEN CHLORIDE (7647-01-0)		
United Kingdom	Local name	Hydrogen chloride
United Kingdom	WEL TWA (mg/m ³)	2 mg/m ³ gas and aerosol mists
United Kingdom	WEL TWA (ppm)	1 ppm gas and aerosol mists
United Kingdom	WEL STEL (mg/m ³)	8 mg/m ³ gas and aerosol mists
United Kingdom	WEL STEL (ppm)	5 ppm gas and aerosol mists
United Kingdom	Regulatory reference	EH40. HSE

8.2. Exposure controls

Appropriate engineering controls:

Floors should be impervious, resistant to liquids and easy to clean. Handle in accordance with good industrial hygiene and safety procedures.

Personal protective equipment:

Avoid inhalation of vapours. Wear recommended personal protective equipment. Avoid all unnecessary exposure.

Materials for protective clothing:

Use chemically protective clothing

Hand protection:

Always wash hands after handling the product. The protective gloves to be used must comply with the specifications of the regulation 2016/425 and the resultant standard EN 374. Impermeable protective gloves

Eye protection:

Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure. Use eye protection according to EN 166, designed to protect against liquid splashes.

Type	Use	Characteristics	Standard
Face shield, Safety goggles	vapours, Droplet	With side shields	EN 166

Skin and body protection:

Keep suitable chemically resistant protective clothing readily available for emergency use. Emergency safety showers should be available in the immediate vicinity of any potential exposure

Type	Standard
Total impervious protective suits, gloves, and boots must be worn to prevent any contact with the product	EN 14605

TITANIUM III CHLORIDE, 20% IN 2M HYDROCHLORIC ACID

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Respiratory protection:

Keep self contained breathing apparatus readily available for emergency use. Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. Wear appropriate mask

Device	Filter type	Condition	Standard
Respiratory protective device with a particle filter		Vapour protection, Protection for Liquid particles	EN 14387

Environmental exposure controls:

Avoid formation of vapours. Prevent entry to sewers and public waters.

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Molecular mass	: 154.23 g/mol
Colour	: Maroon.
Odour	: Irritating odour.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Non flammable.
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: 1.236
Solubility	: soluble in water.
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under recommended handling and storage conditions (see section 7).

10.3. Possibility of hazardous reactions

Stable under normal conditions of use.

10.4. Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

10.5. Incompatible materials

Strong acids. Strong oxidizers.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Thermal decomposition generates : Toxic fumes.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified

TITANIUM III CHLORIDE, 20% IN 2M HYDROCHLORIC ACID

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Acute toxicity (dermal) : Not classified

Acute toxicity (inhalation) : Not classified

HYDROGEN CHLORIDE (7647-01-0)

LC50 inhalation rat (mg/l) 8.3 mg/l 30 mins

LC50 inhalation rat (ppm) 4701 ppm 30 mins

Skin corrosion/irritation : Causes severe skin burns and eye damage.

Serious eye damage/irritation : Serious eye damage, category 1, implicit

Respiratory or skin sensitisation : Not classified

Additional information : Based on available data, the classification criteria are not met

Germ cell mutagenicity : Not classified

Additional information : Based on available data, the classification criteria are not met

Carcinogenicity : Not classified

Additional information : Based on available data, the classification criteria are not met

Reproductive toxicity : Not classified

Additional information : Based on available data, the classification criteria are not met

STOT-single exposure : Not classified

Additional information : Based on available data, the classification criteria are not met

STOT-repeated exposure : Not classified

Additional information : Based on available data, the classification criteria are not met

Aspiration hazard : Not classified

Additional information : Based on available data, the classification criteria are not met

Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity

Acute aquatic toxicity : Not classified

Chronic aquatic toxicity : Not classified

HYDROGEN CHLORIDE (7647-01-0)

LC50 fish 1 3.25 - 3.5 mg/l

EC50 Daphnia 1 4.92 mg/l Daphnia magna

EC50 72h algae (1) 4.7 mg/l

12.2. Persistence and degradability

TITANIUM III CHLORIDE, 20% IN 2M HYDROCHLORIC ACID (7705-07-9)

Persistence and degradability Biodegradable.

Titanium (III) Chloride (7705-07-9)

Persistence and degradability No data available.

HYDROGEN CHLORIDE (7647-01-0)

Persistence and degradability Not applicable for inorganic gases.

12.3. Bioaccumulative potential

TITANIUM III CHLORIDE, 20% IN 2M HYDROCHLORIC ACID (7705-07-9)

Bioaccumulative potential Not potentially bioaccumulable.

Titanium (III) Chloride (7705-07-9)

Bioaccumulative potential No data available.

HYDROGEN CHLORIDE (7647-01-0)

Bioaccumulative potential No data available.

TITANIUM III CHLORIDE, 20% IN 2M HYDROCHLORIC ACID

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

12.4. Mobility in soil

HYDROGEN CHLORIDE (7647-01-0)

Ecology - soil : No data available.

12.5. Results of PBT and vPvB assessment

TITANIUM III CHLORIDE, 20% IN 2M HYDROCHLORIC ACID (7705-07-9)

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Other adverse effects

Additional information : Avoid release to the environment.

SECTION 13: Disposal considerations






13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
3264	3264	3264	3264	3264
14.2. UN proper shipping name				
CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.	Corrosive liquid, acidic, inorganic, n.o.s.	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
Transport document description				
UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Titanium (III) Chloride, 20% Solution in 2M Hydrochloric acid), 8, II, (E)	UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Titanium (III) Chloride, 20% Solution in 2M Hydrochloric acid), 8, II	UN 3264 Corrosive liquid, acidic, inorganic, n.o.s. (Titanium (III) Chloride, 20% Solution in 2M Hydrochloric acid), 8, II	UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Titanium (III) Chloride, 20% Solution in 2M Hydrochloric acid), 8, II	UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Titanium (III) Chloride, 20% Solution in 2M Hydrochloric acid), 8, II
14.3. Transport hazard class(es)				
8	8	8	8	8
				
14.4. Packing group				
II	II	II	II	II
14.5. Environmental hazards				
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No

No supplementary information available

14.6. Special precautions for user

Overland transport

Classification code (ADR) : C1
Special provisions (ADR) : 274
Limited quantities (ADR) : 1I
Excepted quantities (ADR) : E2
Packing instructions (ADR) : P001, IBC02
Mixed packing provisions (ADR) : MP15
Portable tank and bulk container instructions (ADR) : T11

TITANIUM III CHLORIDE, 20% IN 2M HYDROCHLORIC ACID

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Portable tank and bulk container special provisions (ADR) : TP2, TP27

Tank code (ADR) : L4BN

Vehicle for tank carriage : AT

Transport category (ADR) : 2

Hazard identification number (Kemler No.) : 80

Orange plates :



Tunnel restriction code (ADR) : E

EAC code : 2X

APP code : B

Transport by sea

Special provisions (IMDG) : 274

Packing instructions (IMDG) : P001

IBC packing instructions (IMDG) : IBC02

Tank instructions (IMDG) : T11

Tank special provisions (IMDG) : TP2, TP27

EmS-No. (Fire) : F-A

EmS-No. (Spillage) : S-B

Stowage category (IMDG) : B

Stowage and handling (IMDG) : SW2

Properties and observations (IMDG) : Causes burns to skin, eyes and mucous membranes.

Air transport

PCA Excepted quantities (IATA) : E2

PCA Limited quantities (IATA) : Y840

PCA limited quantity max net quantity (IATA) : 0.5L

PCA packing instructions (IATA) : 851

PCA max net quantity (IATA) : 1L

CAO packing instructions (IATA) : 855

CAO max net quantity (IATA) : 30L

Special provisions (IATA) : A3, A803

ERG code (IATA) : 8L

Inland waterway transport

Classification code (ADN) : C1

Special provisions (ADN) : 274

Limited quantities (ADN) : 1 L

Excepted quantities (ADN) : E2

Carriage permitted (ADN) : T

Equipment required (ADN) : PP, EP

Number of blue cones/lights (ADN) : 0

Rail transport

Classification code (RID) : C1

Special provisions (RID) : 274

Limited quantities (RID) : 1L

Excepted quantities (RID) : E2

Packing instructions (RID) : P001, IBC02

Mixed packing provisions (RID) : MP15

Portable tank and bulk container instructions (RID) : T11

Portable tank and bulk container special provisions (RID) : TP2, TP27

Tank codes for RID tanks (RID) : L4BN

Transport category (RID) : 2

Colis express (express parcels) (RID) : CE6

Hazard identification number (RID) : 80

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

TITANIUM III CHLORIDE, 20% IN 2M HYDROCHLORIC ACID

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions
Contains no substance on the REACH candidate list
Contains no REACH Annex XIV substances
Directive 2012/18/EU (SEVESO III)

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out for the substance or the mixture by the supplier

SECTION 16: Other information

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

Full text of H- and EUH-statements:

Acute Tox. 3 (Inhalation)	Acute toxicity (inhal.), Category 3
Press. Gas	Gases under pressure
Pyr. Sol. 1	Pyrophoric Solids, Category 1
Skin Corr. 1A	Skin corrosion/irritation, Category 1A
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
H250	Catches fire spontaneously if exposed to air.
H314	Causes severe skin burns and eye damage.
H331	Toxic if inhaled.

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product