MSDS 데이터 추출 검증 보고서

Document ID: MOCK_MSDS_003

데이터 검증 통계

섹션	DB 키워드 수	그대로 발견	매칭률
Section 1 (제품 정보)	2	2	100.0%
Section 2/3 (성분 정보)	4	4	100.0%
전체 합계	6	6	100.0%

출처별 상세 통계

Section 1 (제품 정보)

- `products.company_name`: 1/1 (100.0%)
- `products.product_name`: 1/1 (100.0%)

Section 2/3 (성분 정보)

- `ingredients.cas`: 1/1 (100.0%)
- `ingredients.conc_raw`: 1/1 (100.0%)

- `ingredients.ec_number`: 1/1 (100.0%)
- `ingredients.name`: 1/1 (100.0%)

데이터베이스 내용

Section 1 - 제품 정보

필드	값	출처
Product Name	HYDROCHLORIC ACID 1.18 S.G. LRG	`products.product_name`
Company Name	Reagent Chemical Services	`products.company_name`

Section 2/3 - 성분 정보

Name	CAS	EC Number	Concentration	Synonyms
HYDROCHLORIC ACID	7647-01-0	231-595-7	10-30%	N/A
HYDROCHLORIC ACID	7647-01-0	231-595-7	10-30%	N/A

하이라이트 범례

- ingredients.cas
- ingredients.conc_raw

- ingredients.ec_number
- ingredients.name
- products.company_name
- products.product_name

슬라이싱된 구간

Extracted Section 1

Revision date: 29/07/2020

Revision: 5

Supersedes date: 28/07/2020

SAFETY DATA SHEET

HYDROCHLORIC ACID 1.18 S.G. LRG

According to Regulation (EC) No 1907/2006, Annex II, as amended. Commission Regulation (EU) No 2015/830

of 28 May 2015.

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

1.1. Product identifier

Product name

HYDROCHLORIC ACID 1.18 S.G. LRG

Product number

1206

REACH registration number

01-2119484862-27-XXXX

CAS number

7647-01-0

EU index number

017-002-01-X

EC number

231-595-7

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

Identified uses

Cleaning agent. Laboratory reagent.

Uses advised against

No specific uses advised against are identified.

1.3. Details of the supplier of the safety data sheet

Supplier

Reagent Chemical Services

11b - 13 Aston Fields Road

Whitehouse Industrial Estate

Runcorn

Cheshire WA7 3DL

T: 01928 716903 (08.30 - 17.00)

F: 01928 716425

E: info@reagent.co.uk

1.4. Emergency telephone number

Emergency telephone

OHES Environmental Ltd 24-7

Tel. 0333 333 9939 (24 hour)

Notes

The product identification numbers refer to hydrogen chloride.

Extracted Section 1

SECTION 3: Composition/information on ingredients

3.2. Mixtures

HYDROCHLORIC ACID ...%

10-30%

CAS number: 7647-01-0

EC number: 231-595-7

REACH registration number: 01-

2119484862-27-0000

Classification

Met. Corr. 1 - H290

Skin Corr. 1B - H314

Eye Dam. 1 - H318

STOT SE 3 - H335

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

Composition comments

An aqueous solution of hydrochloric acid.

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전체 원본 문서 (슬라이싱 구간 표시)

>>> page_0

Extracted Section 1

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Supersedes date: 28/07/2020

SAFETY DATA SHEET

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1.4. Emergency telephone number

Emergency telephone

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Tel. 0333 333 9939 (24 hour)

Notes

The product identification numbers refer to hydrogen chloride.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards

Met. Corr. 1 - H290

Health hazards

Skin Corr. 1B - H314 Eye Dam. 1 - H318 STOT SE 3 - H335

Environmental hazards

Not Classified

Classification (67/548/EEC or

C;R34. Xi;R37.

1999/45/EC)

2.2. Label elements

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HYDROCHLORIC ACID 1.18 S.G. LRG

EC number

231-595-7

Hazard pictograms

Signal word

Danger

Hazard statements

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

H335 May cause respiratory irritation.

Precautionary statements

P260 Do not breathe vapour/ spray.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/ protective clothing/ eye protection/ 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.

P310 Immediately call a POISON CENTER/ doctor.

P501 Dispose of contents/ container in accordance with local regulations.

Contains

HYDROCHLORIC ACID 36 %

Supplementary precautionary

Supplementary precautionary

statements

P234 Keep only in original packaging.

P261 Avoid breathing vapour/ spray.

P264 Wash contaminated skin thoroughly after handling.

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing.

Rinse skin with water or shower.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P312 Call a POISON CENTRE/doctor if you feel unwell.

P321 Specific treatment (see medical advice on this label).

P363 Wash contaminated clothing before reuse.

P390 Absorb spillage to prevent material damage.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

P406 Store in a corrosion-resistant/··· container with a resistant inner liner.

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

Extracted Section 1

SECTION 3: Composition/information on ingredients

3.2. Mixtures

HYDROCHLORIC ACID ...%

10-30%

CAS number: 7647-01-0

EC number: 231-595-7

REACH registration number: 01-

2119484862-27-0000

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HYDROCHLORIC ACID 1.18 S.G. LRG

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Get medical attention immediately. Show this Safety Data Sheet to the medical personnel.

Chemical burns must be treated by a physician.

Inhalation

Remove affected person from source of contamination. Move affected person to fresh air and

Remove affected person from source of contamination. Move affected person to fresh air and

keep warm and at rest in a position comfortable for breathing. Maintain an open airway.

Loosen tight clothing such as collar, tie or belt. When breathing is difficult, properly trained

personnel may assist affected person by administering oxygen. Place unconscious person on

their side in the recovery position and ensure breathing can take place.

their side in the recovery position and ensure breathing can take place.

Ingestion

Rinse mouth thoroughly with water. Remove any dentures. Stop if the affected person feels

sick as vomiting may be dangerous. Do not induce vomiting unless under the direction of

medical personnel. If vomiting occurs, the head should be kept low so that vomit does not

enter the lungs. Never give anything by mouth to an unconscious person. Move affected

person to fresh air and keep warm and at rest in a position comfortable for breathing. Place

unconscious person on their side in the recovery position and ensure breathing can take

place. Maintain an open airway. Loosen tight clothing such as collar, tie or belt.

Skin contact

It is important to remove the substance from the skin immediately. Take off immediately all contaminated clothing. Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes and get medical attention. Chemical burns must be treated by a physician.

Eye contact

Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Continue to rinse for at least 10 minutes.

Protection of first aiders

First aid personnel should wear appropriate protective equipment during any rescue. If it is suspected that volatile contaminants are still present around the affected person, first aid personnel should wear an appropriate respirator or self-contained breathing apparatus. Wash contaminated clothing thoroughly with water before removing it from the affected person, or wear gloves. It may be dangerous for first aid personnel to carry out mouth-to-mouth resuscitation.

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

General information

See Section 11 for additional information on health hazards. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation

A single exposure may cause the following adverse effects: Severe irritation of nose and throat. Symptoms following overexposure may include the following: Corrosive to the respiratory tract.

Ingestion

May cause chemical burns in mouth, oesophagus and stomach. Symptoms following overexposure may include the following: Severe stomach pain. Nausea, vomiting.

Skin contact

Causes severe burns. Symptoms following overexposure may include the following: Pain or

irritation. Redness. Blistering may occur.

Eye contact

Causes serious eye damage. Symptoms following overexposure may include the following:

Pain. Profuse watering of the eyes. Redness.

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

Notes for the doctor

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

The product is not flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry

powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.

>>> page_3

Unsuitable extinguishing

media

Do not use water jet as an extinguisher, as this will spread the fire.

Unsuitable extinguishing

media

Specific hazards

5.2. Special hazards arising from the substance or mixture

Containers can burst violently or explode when heated, due to excessive pressure build-up.

Severe corrosive hazard. Water used for fire extinguishing, which has been in contact with the

product, may be corrosive.

Hazardous combustion

products

Thermal decomposition or combustion products may include the following substances: Very

toxic or corrosive gases or vapours. Hydrogen chloride (HCl).

5.3. Advice for firefighters

Protective actions during

firefighting

Avoid breathing fire gases or vapours. Evacuate area. Keep upwind to avoid inhalation of

gases, vapours, fumes and smoke. Ventilate closed spaces before entering them. Cool

containers exposed to heat with water spray and remove them from the fire area if it can be

done without risk. Cool containers exposed to flames with water until well after the fire is out.

If a leak or spill has not ignited, use water spray to disperse vapours and protect men stopping

the leak. Avoid discharge to the aquatic environment. Control run-off water by containing and

keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate

authorities.

Special protective equipment

for firefighters

Regular protection may not be safe. Wear chemical protective suit. Wear positive-pressure

self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's

clothing conforming to European standard EN469 (including helmets, protective boots and

gloves) will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions

No action shall be taken without appropriate training or involving any personal risk. Keep unnecessary and unprotected personnel away from the spillage. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Wash thoroughly after dealing with a spillage. Ensure procedures and training for emergency decontamination and disposal are in place. Do not touch or walk into spilled material. Provide adequate ventilation. Avoid inhalation of vapours and spray/mists. Use suitable respiratory protection if ventilation is inadequate. Avoid contact with skin and eyes. Avoid contact with contaminated tools and objects.

6.2. Environmental precautions

Environmental precautions

The product may affect the acidity (pH) of water which may have hazardous effects on aquatic organisms. Avoid discharge to the aquatic environment. Large Spillages: Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air).

6.3. Methods and material for containment and cleaning up

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HYDROCHLORIC ACID 1.18 S.G. LRG

Methods for cleaning up

Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. This product is corrosive. Approach the spillage

from upwind. Small Spillages: If the product is soluble in water, dilute the spillage with water and mop it up. Alternatively, or if it is not water-soluble, absorb the spillage with an inert, dry material and place it in a suitable waste disposal container. Large Spillages: If leakage cannot be stopped, evacuate area. Flush spilled material into an effluent treatment plant, or proceed as follows. Contain and absorb spillage with sand, earth or other non-combustible material. Place waste in labelled, sealed containers. Clean contaminated objects and areas thoroughly, observing environmental regulations. The contaminated absorbent may pose the same hazard as the spilled material. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. The requirements of the local water authority must be complied with if contaminated water is flushed directly to the sewer. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

6.4. Reference to other sections

Reference to other sections

For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions

Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Handle all packages and containers carefully to minimise spills. Keep container tightly sealed when not in use. Avoid the formation of mists. This product is corrosive. Immediate first aid is imperative. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers.

Advice on general

occupational hygiene

Wash promptly if skin becomes contaminated. Take off contaminated clothing. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. Change work clothing daily before leaving workplace.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions

Store away from incompatible materials (see Section 10). Store in accordance with local regulations. Store away from the following materials: Alkalis. Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage. Bund storage facilities to prevent soil and water pollution in the event of spillage. The storage area floor should be leak-tight, jointless and not absorbent.

Storage class

Corrosive storage.

7.3. Specific end use(s)

Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

HYDROCHLORIC ACID ...%

Long-term exposure limit (8-hour TWA): WEL 1 ppm 2 mg/m^3 gas and aerosol mists

Short-term exposure limit (15-minute): WEL 5 ppm 8 mg/m^3 gas and aerosol mists

WEL = Workplace Exposure Limit.

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HYDROCHLORIC ACID 1.18 S.G. LRG

DNEL

Workers - Inhalation; Long term local effects: 8 mg/m^3

Workers - Inhalation; Short term local effects: 15 mg/m^3

General population - Inhalation; Long term local effects: 8 mg/m^3

General population - Inhalation; Short term local effects: 15 mg/m^3

HYDROCHLORIC ACID ...% (CAS: 7647-01-0)

DNEL

Workers - Inhalation; Long term local effects: 8 mg/m^3

Workers - Inhalation; Short term local effects: 15 mg/m^3

General population - Inhalation; Long term local effects: 8 mg/m^3

General population - Inhalation; Short term local effects: 15 mg/m^3

8.2. Exposure controls

Protective equipment

Protective equipment

Appropriate engineering

controls

Provide adequate ventilation. Personal, workplace environment or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Use process enclosures, local exhaust ventilation or other engineering controls as the primary means to minimise worker exposure.

Personal protective equipment should only be used if worker exposure cannot be controlled adequately by the engineering control measures. Ensure control measures are regularly inspected and maintained. Ensure operatives are trained to minimise exposure.

Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment for eye and face protection should comply with European Standard EN166. Wear tight-fitting, chemical splash goggles or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. To protect hands from chemicals, gloves should comply with European Standard EN374. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended. It is recommended that gloves are made of the following material: Nitrile rubber. Butyl rubber. Polyvinyl chloride (PVC). Viton rubber (fluoro rubber). The selected gloves should have a breakthrough time of at least 8 hours. Protective gloves should have a minimum thickness of 0.4 mm. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material.

Other skin and body

protection

Hygiene measures

Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible.

Provide eyewash station and safety shower. Contaminated work clothing should not be

allowed out of the workplace. Wash contaminated clothing before reuse. Clean equipment and the work area every day. Good personal hygiene procedures should be implemented. Wash at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke. Preventive industrial medical examinations should be carried out. Warn cleaning personnel of any hazardous properties of the product.

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Respiratory protection

Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is ‘CE’-marked. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges should comply with European Standard EN14387. Full face mask respirators with replaceable filter cartridges should comply with European Standard EN136. Half mask and quarter mask respirators with replaceable filter cartridges should comply with European Standard EN140. Consult with the supplier as to the compatibility of the equipment with the chemical of concern.

Environmental exposure controls

Keep container tightly sealed when not in use. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels. Store in a

demarcated bunded area to prevent release to drains and/or watercourses.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Liquid.

Colour

Colourless.

Odour

Pungent.

pH

pH (concentrated solution): <1

Melting point

Not determined.

Initial boiling point and range

Not determined.

Flash point

Not relevant.

Evaporation rate

Not determined.

Evaporation factor

Not determined.

Flammability (solid, gas)

No.

Upper/lower flammability or

explosive limits

Not relevant.

Vapour pressure

Not determined.

Vapour density

Not determined.

Relative density

Approx. 1.18 @ @ 20°C

Bulk density

Not relevant.

Solubility(ies)

Not determined. Miscible with water.

Partition coefficient

Not applicable. REACH dossier information.

Auto-ignition temperature

Not relevant.

Decomposition Temperature

Not determined.

Viscosity

Not determined.

Explosive properties

Not considered to be explosive.

Explosive under the influence

of a flame

No

Oxidising properties

Does not meet the criteria for classification as oxidising.

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HYDROCHLORIC ACID 1.18 S.G. LRG

9.2. Other information

Refractive index

Not determined.

Particle size

Not relevant.

Molecular weight

Not relevant.

Volatility

Not determined.

Saturation concentration

Not determined.

Critical temperature

Not relevant.

Volatile organic compound

Not relevant.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity

The following materials may react with the product: Alkalis. Inorganic sulphides. Organic

sulphur compounds. Oxidising agents. Inorganic cyanides. Organic cyanides (nitriles).

10.2. Chemical stability

Stability

Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions

May generate heat. In contact with some metals can generate hydrogen gas, which can form explosive mixtures with air. Reactions can occur with incompatible materials to produce toxic or corrosive gases. May produce hydrogen cyanide or hydrogen sulphide.

10.4. Conditions to avoid

Conditions to avoid

Avoid heat. Containers can burst violently or explode when heated, due to excessive pressure build-up.

10.5. Incompatible materials

Materials to avoid

Alkalis. Amines. Mild steel. Stainless steel. Aluminium. May be corrosive to metals. Oxidising agents. Inorganic sulphides. Organic sulphur compounds. Inorganic cyanides. Organic agents. Inorganic sulphides. Organic sulphur compounds. Inorganic cyanides. Organic cyanides (nitriles).

10.6. Hazardous decomposition products

Hazardous decomposition products

Does not decompose when used and stored as recommended.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD□□)

Based on available data the classification criteria are not met.

Acute toxicity - dermal

Notes (dermal LD□□)

Based on available data the classification criteria are not met.

Acute toxicity - inhalation

Acute toxicity inhalation (LC□□

8.3

Acute toxicity inhalation (LC□□

8.3

vapours mg/l)

Notes (inhalation LC□□)

Based on available data the classification criteria are not met.

Skin corrosion/irritation

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HYDROCHLORIC ACID 1.18 S.G. LRG

Animal data

Skin Corr. 1B - H314 Causes severe burns.

Extreme pH

≤ 2 Corrosive.

Serious eye damage/irritation

Serious eye damage/irritation

Eye Dam. 1 - H318 Corrosive to skin. Corrosivity to eyes is assumed.

Respiratory sensitisation

Respiratory sensitisation

Based on available data the classification criteria are not met.

Skin sensitisation

Skin sensitisation

Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro

Based on available data the classification criteria are not met.

Genotoxicity - in vivo

Scientifically unjustified.

Carcinogenicity

Carcinogenicity

Based on available data the classification criteria are not met. NOAEL <10 ppm, Inhalation,

Rat

IARC carcinogenicity

None of the ingredients are listed or exempt.

Reproductive toxicity

Reproductive toxicity - fertility

Based on available data the classification criteria are not met.

Reproductive toxicity -

Based on available data the classification criteria are not met.

Reproductive toxicity -

development

Specific target organ toxicity - single exposure

STOT - single exposure

STOT SE 3 - H335 May cause respiratory irritation.

Target organs

Respiratory system, lungs

Specific target organ toxicity - repeated exposure

STOT - repeated exposure

Not classified as a specific target organ toxicant after repeated exposure. NOAEL 20 ppm,

Inhalation, Rat 13 weeks

Target organs

Respiratory system, lungs

Aspiration hazard

Aspiration hazard

Based on available data the classification criteria are not met.

General information

The severity of the symptoms described will vary dependent on the concentration and the

length of exposure.

Inhalation

Corrosive to the respiratory tract. Symptoms following overexposure may include the

following: Severe irritation of nose and throat.

Ingestion

May cause chemical burns in mouth, oesophagus and stomach. Symptoms following

overexposure may include the following: Severe stomach pain. Nausea, vomiting.

Skin contact

Causes severe burns. Symptoms following overexposure may include the following: Pain or

irritation. Redness. Blistering may occur.

Eye contact

Causes serious eye damage. Symptoms following overexposure may include the following:

Pain. Profuse watering of the eyes. Redness.

Route of exposure

Ingestion Inhalation Skin and/or eye contact

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HYDROCHLORIC ACID 1.18 S.G. LRG

Target organs

Respiratory system, lungs

Toxicological information on ingredients.

HYDROCHLORIC ACID ...%

Toxicological effects

The toxicity of this substance has been assessed during REACH registration.

Acute toxicity - oral

Notes (oral LD☒☒)

Scientifically unjustified. REACH dossier information.

Acute toxicity - dermal

Notes (dermal LD☒☒)

Scientifically unjustified. REACH dossier information.

Acute toxicity - inhalation

Acute toxicity inhalation

(LC☒☒ dust/mist mg/l)

8.3

Species

Rat

Notes (inhalation LC☒☒)

REACH dossier information. LC50 8.3 mg/l, 30 minutes, Dust/Mist Rat

Skin corrosion/irritation

Animal data

Corrosive to skin. REACH dossier information.

Serious eye damage/irritation

Serious eye

Causes serious eye damage. REACH dossier information.

damage/irritation

Respiratory sensitisation

Respiratory sensitisation

Scientifically unjustified.

Skin sensitisation

Skin sensitisation

Not sensitising. REACH dossier information.

Germ cell mutagenicity

Genotoxicity - in vitro

Negative. REACH dossier information.

Genotoxicity - in vivo

No specific test data are available. REACH dossier information.

Carcinogenicity

Carcinogenicity

NOAEL <10 ppm, Inhalation, Rat Based on available data the classification criteria

are not met.

Reproductive toxicity

Reproductive toxicity -

Scientifically unjustified. REACH dossier information.

fertility

Reproductive toxicity -

This substance has no evidence of toxicity to reproduction.

Reproductive toxicity -

development

Specific target organ toxicity - single exposure

STOT - single exposure

No specific test data are available.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure NOAEL 20 ppm, Inhalation, Rat 13 weeks

Aspiration hazard

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HYDROCHLORIC ACID 1.18 S.G. LRG

Aspiration hazard

Not anticipated to present an aspiration hazard, based on chemical structure.

Inhalation

Irritating to respiratory system. Burns can occur.

Ingestion

Corrosive. Small amounts may cause serious damage.

Skin contact

Causes burns.

Eye contact

This product is strongly corrosive. Causes serious eye damage.

SECTION 12: Ecological information

Ecotoxicity

The product may affect the acidity (pH) of water which may have hazardous effects on aquatic

organisms.

Ecological information on ingredients.

HYDROCHLORIC ACID ...%

Ecotoxicity

The product may affect the acidity (pH) of water which may have hazardous effects

on aquatic organisms.

12.1. Toxicity

Toxicity

Based on available data the classification criteria are not met.

Ecological information on ingredients.

HYDROCHLORIC ACID ...%

Acute aquatic toxicity

Acute toxicity - fish

LC☒☒, 96 hours: pH 3.5 - 3.25 , Lepomis macrochirus (Bluegill)

Acute toxicity - aquatic

invertebrates

Acute toxicity - aquatic

Acute toxicity - aquatic

plants

EC□□, 72 hours: pH 4.7 , Freshwater algae

Acute toxicity -

microorganisms

EC□□, 3 hours: pH 5 - 5.5 , Activated sludge

Acute toxicity - terrestrial

Not available.

Chronic aquatic toxicity

Chronic toxicity - fish early

Not determined.

life stage

Short term toxicity -

Not determined.

embryo and sac fry stages

Chronic toxicity - aquatic

Scientifically unjustified.

invertebrates

12.2. Persistence and degradability

Persistence and degradability

The product contains inorganic substances which are not biodegradable.

Phototransformation

Not relevant.

Stability (hydrolysis)

Not relevant.

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Biodegradation

Scientifically unjustified.

Biological oxygen demand

Not relevant.

Chemical oxygen demand

Not relevant.

Ecological information on ingredients.

HYDROCHLORIC ACID ...%

Persistence and

degradability

The product is expected to be biodegradable.

Phototransformation

Substance is inorganic.

Stability (hydrolysis)

Not relevant.

Biodegradation

Scientifically unjustified.

Biological oxygen demand

Not relevant.

Chemical oxygen demand

Not relevant.

12.3. Bioaccumulative potential

Bioaccumulative potential

Bioaccumulation is unlikely.

Partition coefficient

Not applicable. REACH dossier information.

Ecological information on ingredients.

HYDROCHLORIC ACID ...%

Bioaccumulative potential

The product is not bioaccumulating.

Partition coefficient

Scientifically unjustified.

12.4. Mobility in soil

Mobility

The product is water-soluble and may spread in water systems. Volatile liquid.

Adsorption/desorption

coefficient

Scientifically unjustified.

Henry's law constant

Not determined.

Surface tension

Not relevant. REACH dossier information.

Ecological information on ingredients.

HYDROCHLORIC ACID ...%

Mobility

The product is miscible with water and may spread in water systems.

Adsorption/desorption

coefficient

Scientifically unjustified.

Henry's law constant

Not determined.

Surface tension

Scientifically unjustified.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB

This product does not contain any substances classified as PBT or vPvB.

assessment

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Ecological information on ingredients.

HYDROCHLORIC ACID ...%

Results of PBT and vPvB

assessment

This substance is not classified as PBT or vPvB according to current EU criteria.

assessment

12.6. Other adverse effects

Other adverse effects

None known.

Ecological information on ingredients.

HYDROCHLORIC ACID ...%

Other adverse effects

Not determined.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information

The generation of waste should be minimised or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

Disposal methods

Do not empty into drains. Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labelled with their contents. Incineration or landfill should only be considered when recycling is not feasible.

SECTION 14: Transport information

General

For limited quantity packaging/limited load information, consult the relevant modal documentation using the data shown in this section.

14.1. UN number

UN No. (ADR/RID)

1789

UN No. (IMDG)

1789

UN No. (ICAO)

1789

14.2. UN proper shipping name

Proper shipping name

HYDROCHLORIC ACID

(ADR/RID)

Proper shipping name (IMDG) HYDROCHLORIC ACID

Proper shipping name (ICAO)

HYDROCHLORIC ACID

Proper shipping name (ADN)

HYDROCHLORIC ACID

14.3. Transport hazard class(es)

ADR/RID class

8

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IMDG class

8

ICAO class/division

8

Transport labels

14.4. Packing group

ADR/RID packing group

II

IMDG packing group

II

ICAO packing group

II

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

Always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to

do in the event of an accident or spillage.

EmS

F-A, S-B

Emergency Action Code

2R

Hazard Identification Number

80

(ADR/RID)

(ADR/RID)

Tunnel restriction code

(E)

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

Transport in bulk according to

Not applicable.

Annex II of MARPOL 73/78

and the IBC Code

and the IBC Code

SECTION 15: Regulatory information

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

National regulations

Control of Substances Hazardous to Health Regulations 2002 (as amended).

EU legislation

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18

December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of

Chemicals (REACH) (as amended).

Commission Regulation (EU) No 2015/830 of 28 May 2015.

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 (as

amended).

Guidance

Workplace Exposure Limits EH40.

Industry - Dermal; Long term systemic effects 22 mg/kg/day

ECHA Guidance on the compilation of safety data sheets 2014.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

Inventories

14/15

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EU - EINECS/ELINCS

None of the ingredients are listed or exempt.

SECTION 16: Other information

Abbreviations and acronyms

used in the safety data sheet

ADR: European Agreement concerning the International Carriage of Dangerous Goods by

Road.

ADN: European Agreement concerning the International Carriage of Dangerous Goods by

ADN: European Agreement concerning the International Carriage of Dangerous Goods by

Inland Waterways.

Inland Waterways.

RID: European Agreement concerning the International Carriage of Dangerous Goods by

RID: European Agreement concerning the International Carriage of Dangerous Goods by

Rail.

Rail.

IATA: International Air Transport Association.

ICAO: Technical Instructions for the Safe Transport of Dangerous Goods by Air.

IMDG: International Maritime Dangerous Goods.

CAS: Chemical Abstracts Service.

ATE: Acute Toxicity Estimate.

LC□□: Lethal Concentration to 50 % of a test population.

LD□□: Lethal Dose to 50% of a test population (Median Lethal Dose).

LD□□: Lethal Dose to 50% of a test population (Median Lethal Dose).

EC□□: 50% of maximal Effective Concentration.

PBT: Persistent, Bioaccumulative and Toxic substance.

vPvB: Very Persistent and Very Bioaccumulative.

Classification abbreviations

Classification abbreviations

and acronyms

Met. Corr. = Corrosive to metals

Eye Dam. = Serious eye damage

Skin Corr. = Skin corrosion

STOT SE = Specific target organ toxicity-single exposure

General information

This datasheet is not intended to be a replacement for a full risk assessment, these should

always be carried out by competent persons. Toxicological and ecotoxicological information

has been taken from the ECHA website of registered substances.

Key literature references and

sources for data

Source: European Chemicals Agency, http://echa.europa.eu/

Classification procedures

according to Regulation (EC)

according to Regulation (EC)

1272/2008

Eye Dam. 1 - H318: Skin Corr. 1B - H314: STOT SE 3 - H335: : Calculation method. Met.

Corr. 1 - H290: : Expert judgement.

Training advice

Only trained personnel should use this material.

Revision comments

Change to section 15

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11757

Risk phrases in full

R34 Causes burns.

R37 Irritating to respiratory system.

Hazard statements in full

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

H335 May cause respiratory irritation.

This 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. Such information is, to the best of the company's knowledge and belief, accurate

and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or

completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.