

## Safety Data Sheet

according to UK REACH Regulation

### Hydrochloric Acid 32 %

Revision date: 15.01.2024

Product code: 19294.xxxxx

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

##### 1.1. Product identifier

Hydrochloric Acid 32 %

UFI: 17E0-6174-PXJG-6V10

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

###### Use of the substance/mixture

laboratory reagent. Intended for scientific research and development.

###### Uses advised against

Any non-intended use.

##### 1.3. Details of the supplier of the safety data sheet

Company name: MORPHISTO GmbH  
Street: Schumannstr. 142/144  
Place: D-63069 Offenbach  
Telephone: +49 (0) 69 / 400 3019-60      Telefax: +49 (0) 69 / 400 3019-64  
E-mail: info@morphisto.de  
Contact person: Morphisto GmbH  
E-mail: gefahrstoffmanagement@morphisto.de  
Internet: http://www.morphisto.de

##### 1.4. Emergency telephone number:

Poison Information Center Mainz, Germany, Tel: +49(0)6131/19240

#### SECTION 2: Hazards identification

##### 2.1. Classification of the substance or mixture

###### GB CLP Regulation

Met. Corr. 1; H290  
Skin Corr. 1B; H314  
Eye Dam. 1; H318  
STOT SE 3; H335

Full text of hazard statements: see SECTION 16.

##### 2.2. Label elements

###### GB CLP Regulation

###### Hazard components for labelling

hydrochloric acid %

Signal word: Danger

###### Pictograms:



###### Hazard statements

H290 May be corrosive to metals.  
H314 Causes severe skin burns and eye damage.  
H335 May cause respiratory irritation.

###### Precautionary statements

P234 Keep only in original packaging.  
P260 Do not breathe mist/vapours/spray.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.

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- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
- 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.

#### Labelling of packages where the contents do not exceed 125 ml

Signal word: Danger

Pictograms:



#### Hazard statements

H314

#### Precautionary statements

P260-P280-P303+P361+P353-P305+P351+P338-P310

#### 2.3. Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulating and toxic (PBT) or very persistent and very bioaccumulating (vPvB) at levels of 0.1% or higher. Ecological information: The substance/mixture does not contain any components that are considered to be hazardous according to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2018/605 in amounts of 0.1 % or more have endocrine disrupting properties. Toxicological information: The substance/mixture does not contain any components that are to be classified according to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2018/605 in quantities of 0.1 % or more have endocrine disrupting properties.

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

##### Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
7647-01-0	hydrochloric acid %			30 - < 35 %
	231-595-7	017-002-01-X	01-2119484862-27	
	Met. Corr. 1, Skin Corr. 1B, Eye Dam. 1, STOT SE 3; H290 H314 H318 H335			

Full text of H and EUH statements: see section 16.

##### Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
7647-01-0	231-595-7	hydrochloric acid %	30 - < 35 %
	oral: LD50 = 2222 mg/kg Skin Corr. 1B; H314: >= 25 - 100 Skin Irrit. 2; H315: >= 10 - < 25 Eye Irrit. 2; H319: >= 10 - < 25 STOT SE 3; H335: >= 10 - 100		

#### Further Information

This product contains no substances of very high concern (SVHC) (>0,1%) which are included in the Candidate List according to Article 59 of REACH.

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

##### General information

First aider: Pay attention to self-protection! Take off immediately all contaminated clothing. Remove affected

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person from the danger area and lay down. Provide fresh air. Put victim at rest, cover with a blanket and keep warm. To supervise the blood circulation. In the case of all acid injuries, it is essential to consult a doctor.

Chemical burns may be noticed after several hours!

**After inhalation**

Medical treatment necessary. Provide fresh air. Remove person to fresh air and keep comfortable for breathing. In case of irregular breathing or respiratory arrest provide artificial respiration. Avoid mouth to mouth resuscitation. Use a resuscitator or respirator.

**After contact with skin**

After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention. Immediate medical treatment required because corrosive injuries that are not treated are hard to cure.

**After contact with eyes**

In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist. Remove contact lenses, if present and easy to do. Continue rinsing.

**After ingestion**

Adverse human health effects and symptoms: Gastric perforation. Call a physician immediately. Do not allow a neutralisation agent to be drunk. Do NOT induce vomiting. Rinse mouth thoroughly with water. Let water be drunk in little sips (dilution effect). Observe risk of aspiration if vomiting occurs. Never give anything by mouth to an unconscious person or a person with cramps. If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects).

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

Corrosion. Risk of blindness. Risk of serious damage to eyes. Irritation. Cough. Dyspnoea. If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects).

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

Treat symptomatically.

**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable extinguishing media**

Co-ordinate fire-fighting measures to the fire surroundings. Sand. Foam. Carbon dioxide (CO<sub>2</sub>). Extinguishing powder. Water spray jet

**Unsuitable extinguishing media**

Full water jet

**5.2. Special hazards arising from the substance or mixture**

Non-flammable. May cause fire or explosion; strong oxidiser. In case of fire may be liberated: Carbon monoxide Carbon dioxide (CO<sub>2</sub>) Hydrochloric gas.

**5.3. Advice for firefighters**

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit. In case of fire and/or explosion do not breathe fumes.

**Additional information**

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately.

Do not allow entering drains or surface water.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures****General advice**

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment. Material, acid-resistant. Provide adequate ventilation.

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**For non-emergency personnel**

Clear danger zone. Follow emergency plan. Consult an expert.

**For emergency responders**

Move undamaged containers from immediate hazard area if it can be done safely. Stop leak if safe to do so.

**6.2. Environmental precautions**

Do not allow to enter into surface water or drains. Prevent spread over a wide area (e.g. by containment or oil barriers). Product is acid. The product needs to apply neutralizing agents before draining to wastewater treatment plants.

**6.3. Methods and material for containment and cleaning up****For containment**

Cover drains. Collect, embank and pump out. Observe possible material restrictions (section 10). Contain leaks or spills within cabinets with removable trays.

**For cleaning up**

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

**Other information**

Apply chemical neutralizers.

Clean contaminated objects and areas thoroughly observing environmental regulations.

**6.4. Reference to other sections**

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

**SECTION 7: Handling and storage****7.1. Precautions for safe handling****Advice on safe handling**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray. Process within closed systems. Use extractor hood (laboratory). Provide adequate ventilation as well as local exhaustion at critical locations. Avoid contact with skin, eyes and clothes. Wear suitable protective clothing. ( See section 8. ). Material, acid-resistant. Conditions to avoid: aerosol or mist formation. Handle and open container with care. Always close containers tightly after the removal of product.

**Advice on protection against fire and explosion**

May cause or intensify fire; oxidiser. Vapours/aerosols should be exhausted directly at the point of origin. Usual measures for fire prevention.

**Advice on general occupational hygiene**

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat, drink, smoke, sniff. Take off immediately all contaminated clothing and wash it before reuse. Used working clothes should not be worn outside the work area. Street clothing should be stored separately from work clothing. Protect skin by using skin protective cream. Always close containers tightly after the removal of product.

**7.2. Conditions for safe storage, including any incompatibilities****Requirements for storage rooms and vessels**

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaustion at critical locations. Unsuitable container/equipment material: Metal. Only use containers specifically approved for the substance/product. Make sure spills can be contained (e.g. sump pallets or kerbed areas).

**Hints on joint storage**

Do not store together with: food and feed. pharmaceuticals. Infectious substances. Radioactive substances. Explosive substances. Oxidizing substances. Oxidizing liquids. Organic peroxides. Self-reactive substances and mixtures. Pyrophoric solids. Substances which in contact with water form flammable gases. Ammonium

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nitrate and preparations containing ammonium nitrate. Oxidizing solids. Oxidizing liquids.

#### Further information on storage conditions

Recommended storage temperature: 15-25 °C

Protect against: frost. UV-radiation/sunlight. heat. Humidity

#### 7.3. Specific end use(s)

See section 1.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### Exposure limits (EH40)

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
7647-01-0	Hydrogen chloride (gas and aerosol mists)	1	2		TWA (8 h)	WEL
		5	8		STEL (15 min)	WEL

##### DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
7647-01-0	hydrochloric acid %			
Worker DNEL, acute		inhalation	local	15 mg/m <sup>3</sup>
Worker DNEL, long-term		inhalation	local	8 mg/m <sup>3</sup>

#### 8.2. Exposure controls



##### Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray. Technical measures and the application of suitable work processes have priority over personal protection equipment. Process within closed systems. Use extractor hood (laboratory). Provide adequate ventilation. Provide washing facilities at the workplace, provide an eye shower or eyewash bottle and mark them.

##### Individual protection measures, such as personal protective equipment

###### Eye/face protection

Suitable eye protection: goggles. Tightly sealed safety glasses. EN 166.

###### Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. Wear suitable gloves.

Suitable material:

FKM (fluororubber). Thickness of glove material: 0,4 mm, Breakthrough time  $\geq$  8 h.

Butyl rubber. Thickness of glove material: 0,5 mm, Breakthrough time  $\geq$  8 h.

CR (polychloroprenes, Chloroprene rubber). - Thickness of glove material: 0,5 mm, Breakthrough time  $\geq$  8 h.

NBR (Nitrile rubber). - Thickness of glove material: 0,35 mm, Breakthrough time  $\geq$  8 h.

PVC (Polyvinyl chloride). - Thickness of glove material: 0,5 mm, Breakthrough time  $\geq$  8 h.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

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Before using check leak tightness / impermeability.

#### Skin protection

Use of protective clothing. Suitable protective clothing: Lab apron. Material, acid-resistant.

Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500 (D).

#### Respiratory protection

In case of inadequate ventilation wear respiratory protection. Respiratory protection necessary at: exceeding exposure limit values, insufficient ventilation and aerosol or mist formation.

Suitable respiratory protective equipment: gas filtering equipment (EN 141). Type: E. Identification color: yellow  
 The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used. The wearing time limitations according to GefStoffV in conjunction with the rules for the use of respiratory protective devices (BGR 190) must be observed.

#### Environmental exposure controls

Do not allow uncontrolled discharge of product into the environment.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state:	Liquid	
Colour:	colourless	
Odour:	stinging	
Melting point/freezing point:		No information available.
Boiling point or initial boiling point and boiling range:		No information available.
Flammability:		No information available.
Lower explosion limits:		No information available.
Upper explosion limits:		No information available.
Flash point:		No information available.
Auto-ignition temperature:		No information available.
Decomposition temperature:		No information available.
pH-Value (at 20 °C):		0-1
Viscosity / kinematic:		No information available.
Water solubility: (at 20 °C)		easily soluble.
Solubility in other solvents		
No information available.		
Partition coefficient n-octanol/water:		No information available.
Vapour pressure: (at 20 °C)		190 hPa
Vapour pressure: (at 50 °C)		No information available.
Density (at 20 °C):		1,16 g/cm <sup>3</sup>
Bulk density:		No information available.
Relative vapour density:		No information available.
Particle characteristics:		not applicable

#### 9.2. Other information

##### Information with regard to physical hazard classes

Explosive properties

The product is not: Explosive. none

Sustaining combustion:

Not sustaining combustion

Self-ignition temperature

Solid:

No information available.

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Gas: No information available.  
 Oxidizing properties: none

#### Other safety characteristics

Evaporation rate: No information available.  
 Solvent separation test: No information available.  
 Solid content: No information available.  
 Sublimation point: No information available.  
 Softening point: No information available.  
 Pour point: No information available.  
 Viscosity / dynamic: No information available.  
 Flow time: No information available.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Possibility of hazardous reactions. Corrosive to metals.

### 10.2. Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature.

### 10.3. Possibility of hazardous reactions

Exothermic reaction with: Base, Peroxides, Oxidizing agent. Explosion risk in contact with: potassium Sodium. permanganates, e.g. potassium permanganate. Sulphuric acid, concentrated.

The substance may react dangerously with: Aluminium. Amines. Fluorine. alkalines Oxidizing agents. Caesium carbide. Calcium carbide. Calcium hydride. Formaldehyde. Copper sulphide. Lithium silicide. Metals. Sodium hydride. Sodium hypochlorite and its solutions. Sodium hypochlorite. Rubidium carbide. Silanes. Silicon dioxide. Vinyl methyl ether. Zinc

### 10.4. Conditions to avoid

Protect against: UV-radiation/sunlight. heat.

### 10.5. Incompatible materials

Metal. Keep away from: Base, Oxidizing agent, Peroxides. Materials to avoid: Oxidizing agents, strong. Reducing agents, strong. metals. peroxides, for example hydrogen peroxide.

### 10.6. Hazardous decomposition products

In case of fire may be liberated: Carbon monoxide. Carbon dioxide (CO<sub>2</sub>). Hydrogen chloride (HCl).

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in GB CLP Regulation

#### Acute toxicity

Based on available data, the classification criteria are not met.

#### ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
7647-01-0	hydrochloric acid %				
	oral	LD50 2222 mg/kg	Rat	suppliers SDS.	

#### Irritation and corrosivity

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Causes severe skin burns and eye damage.

Causes serious eye damage.

**Sensitising effects**

Based on available data, the classification criteria are not met.

**Carcinogenic/mutagenic/toxic effects for reproduction**

Based on available data, the classification criteria are not met.

**STOT-single exposure**

May cause respiratory irritation. (hydrochloric acid %)

**STOT-repeated exposure**

Based on available data, the classification criteria are not met.

**Aspiration hazard**

Based on available data, the classification criteria are not met.

**11.2. Information on other hazards****Endocrine disrupting properties**

This product does not contain any substance that has endocrine disrupting properties in humans as no ingredient meets the criteria.

**Other information**

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

**SECTION 12: Ecological information****12.1. Toxicity**

Based on available data, the classification criteria are not met.

**12.2. Persistence and degradability**

The product has not been tested.

**12.3. Bioaccumulative potential**

No indication of bioaccumulation potential.

**12.4. Mobility in soil**

No information available.

**12.5. Results of PBT and vPvB assessment**

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.

**12.6. Endocrine disrupting properties**

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

**12.7. Other adverse effects**

slightly hazardous to water.

**Further information**

Avoid release to the environment.

**SECTION 13: Disposal considerations****13.1. Waste treatment methods****Disposal recommendations**

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation. Hazardous waste according to Directive 2008/98/EC (waste framework directive). Observe Waste Directive 2008/98/EC. Product residues must be disposed of in accordance with national and regional regulations. Leave chemicals in original containers. Do not mix with other wastes. Uncleaned containers must be treated according to the product. Find out more about take-back systems for chemicals and packaging at [www.Retrologistik.de](http://www.Retrologistik.de) or use the address to contact us if you have any questions. The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process. Consult the local waste disposal expert about waste disposal.



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Control report for waste code/ waste marking according to (EWC) European Waste Catalogue:

#### List of Wastes Code - residues/unused products

060704 WASTES FROM INORGANIC CHEMICAL PROCESSES; wastes from the MFSU of halogens and halogen chemical processes; solutions and acids, for example contact acid; hazardous waste

#### List of Wastes Code - used product

060704 WASTES FROM INORGANIC CHEMICAL PROCESSES; wastes from the MFSU of halogens and halogen chemical processes; solutions and acids, for example contact acid; hazardous waste

#### List of Wastes Code - contaminated packaging

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste

#### Contaminated packaging

Wash with plenty of water. Completely emptied packages can be recycled. Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

### SECTION 14: Transport information

#### Land transport (ADR/RID)

**14.1. UN number or ID number:** UN 1789  
**14.2. UN proper shipping name:** HYDROCHLORIC ACID  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** II  
 Hazard label: 8



Classification code: C1  
 Special Provisions: 520  
 Limited quantity: 1 L  
 Excepted quantity: E2  
 Transport category: 2  
 Hazard No: 80  
 Tunnel restriction code: E

#### Inland waterways transport (ADN)

**14.1. UN number or ID number:** UN 1789  
**14.2. UN proper shipping name:** HYDROCHLORIC ACID  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** II  
 Hazard label: 8



Classification code: C1  
 Special Provisions: 520  
 Limited quantity: 1 L  
 Excepted quantity: E2

#### Marine transport (IMDG)

**14.1. UN number or ID number:** UN 1789  
**14.2. UN proper shipping name:** HYDROCHLORIC ACID  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** II

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Hazard label: 8



Special Provisions: -

Limited quantity: 1 L

Excepted quantity: E2

EmS: F-A, S-B

Segregation group: 1 - acids

**Air transport (ICAO-TI/IATA-DGR)**

**14.1. UN number or ID number:** UN 1789

**14.2. UN proper shipping name:** HYDROCHLORIC ACID

**14.3. Transport hazard class(es):** 8

**14.4. Packing group:** II

Hazard label: 8



Special Provisions: A3 A803

Limited quantity Passenger: 0.5 L

Passenger LQ: Y840

Excepted quantity: E2

IATA-packing instructions - Passenger: 851

IATA-max. quantity - Passenger: 1 L

IATA-packing instructions - Cargo: 855

IATA-max. quantity - Cargo: 30 L

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: No

**14.6. Special precautions for user**

Warning: strongly corrosive. Safe handling: see section 7

Personal protection equipment: see section 8

**14.7. Maritime transport in bulk according to IMO instruments**

not relevant

**SECTION 15: Regulatory information**
**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**
**EU regulatory information**

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 75

Directive 2010/75/EU on industrial emissions: No information available.

Directive 2004/42/EC on VOC in paints and varnishes: No information available.

Information according to Directive 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

**Additional information**

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

**National regulatory information**

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Employment restrictions:

Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

Water hazard class (D):

1 - slightly hazardous to water

#### **15.2. Chemical safety assessment**

For the following substances of this mixture a chemical safety assessment has been carried out:  
hydrochloric acid %

### **SECTION 16: Other information**

#### **Changes**

This data sheet contains changes from the previous version in section(s):

1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16.

Rev.: 1,0; 06.08.2021, Initial release.

Rev. 2,0; 105.01.2024; general adjustment(s)

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**Abbreviations and acronyms**

Met. Corr: Corrosive to metals  
Skin Corr: Skin corrosion  
Eye Dam: Eye damage  
STOT SE: Specific target organ toxicity - single exposure  
ADR: Accord européen sur le transport des marchandises dangereuses par Route  
AwSV: Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen  
AGW: Arbeitsplatzgrenzwert  
AVV: Abfallverzeichnisverordnung  
CAS: Chemical Abstracts Service  
CLP: Classification, Labelling and Packaging of substances and mixtures  
DNEL: Derived No Effect Level  
d: day(s)  
EAKV: Europäisches Abfallverzeichnis gemäß Entwurf Abfallverzeichnisverordnung  
EINECS: European INventory of Existing Commercial chemical Substances  
ELINCS: European List of Notified Chemical Substances  
ECHA: European Chemicals Agency  
EWC: European Waste Catalogue  
IARC: INTERNATIONAL AGENCY FOR RESEARCH ON CANCER  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)  
ICAO: International Civil Aviation Organization  
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)  
h: hour  
LOAEL: Lowest observed adverse effect level  
LOAEC: Lowest observed adverse effect concentration  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
NOAEL: No observed adverse effect level  
NOAEC: No observed adverse effect level  
NLP: No-Longer Polymers  
N/A: not applicable  
OECD: Organisation for Economic Co-operation and Development  
PNEC: predicted no effect concentration  
PBT: Persistent bioaccumulative toxic  
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail )  
REACH: Registration, Evaluation, Authorisation of Chemicals  
SVHC: substance of very high concern  
TRGS Technische Regeln fuer Gefahrstoffe  
UN: United Nations  
VOC: Volatile Organic Compounds  
VwVwS: Verwaltungsvorschrift wassergefährdender Stoffe  
WGK: Wassergefährdungsklasse  
CLP: Classification, labelling and Packaging  
REACH: Registration, Evaluation and Authorization of Chemicals  
GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals  
UN: United Nations  
CAS: Chemical Abstracts Service  
DNEL: Derived No Effect Level  
DMEL: Derived Minimal Effect Level  
PNEC: Predicted No Effect Concentration  
ATE: Acute toxicity estimate

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LL50: Lethal loading, 50%  
 EL50: Effect loading, 50%  
 EC50: Effective Concentration 50%  
 ErC50: Effective Concentration 50%, growth rate  
 NOEC: No Observed Effect Concentration  
 BCF: Bio-concentration factor  
 PBT: persistent, bioaccumulative, toxic  
 vPvB: very persistent, very bioaccumulative  
 ADR: Accord européen sur le transport des marchandises dangereuses par Route  
 (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
 RID: Regulations concerning the international carriage of dangerous goods by rail  
 ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways  
 (Accord européen relatif au transport international des marchandises dangereuses par voies de navigation  
 intérieures)  
 EmS: Emergency Schedules  
 MFAG: Medical First Aid Guide  
 MARPOL: International Convention for the Prevention of Marine Pollution from Ships  
 IBC: Intermediate Bulk Container  
 For abbreviations and acronyms, see table at <http://abbrev.esdscom.eu>  
 EC/EEC: European Community/European Economic Community  
 EU: European Union  
 M-factor: Multiplying factor  
 IATA: International Air Transport Association  
 DGR: Dangerous Goods Regulations  
 ICAO: International Civil Aviation Organization  
 TI: Technical Instructions  
 VOC: volatile organic compound  
 For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety  
 assessment, chapter R.20 (Table of terms and abbreviations).

#### Classification for mixtures and used evaluation method according to GB CLP Regulation

Classification	Classification procedure
Met. Corr. 1; H290	On basis of test data
Skin Corr. 1B; H314	Calculation method
Eye Dam. 1; H318	Calculation method
STOT SE 3; H335	Calculation method

#### Relevant H and EUH statements (number and full text)

H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.

#### Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations. Classification according to Regulation (EC) No 1272/2008 [CLP] - Classification procedure:  
 Health hazards: Calculation method.  
 Environmental hazards: Calculation method.  
 Physical hazards: On basis of test data and / or calculated and / or estimated.

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of

## Safety Data Sheet

according to UK REACH Regulation

### Hydrochloric Acid 32 %

Revision date: 15.01.2024

Product code: 19294.xxxxx

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processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

*(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*