

#### Hydrochloric acid 5 mol/l - 5 N volumetric standard solution

article number: **1E2C** Version: **1.0 en**  date of compilation: 18.08.2021

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

ard solution

[017-002-01-X]

[231-595-7]

[7647-01-0]

not relevant (mixture)

Laboratory chemical

Laboratory and analytical use

1E2C

1.1 Product identifier

Article number

Identification of the substance

Registration number (REACH)

Index number in CLP Annex VI

EC number

CAS number

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

Relevant identified uses:

Uses advised against:

Do not use for products which come into contact with foodstuffs. Do not use for private purposes (household).

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

Carl Roth GmbH + Co KG Schoemperlenstr. 3-5 D-76185 Karlsruhe Germany

**Telephone:**+49 (0) 721 - 56 06 0 **Telefax:** +49 (0) 721 - 56 06 149 **e-mail:** sicherheit@carlroth.de **Website:** www.carlroth.de

Competent person responsible for the safety data :Department Health, Safety and Environment sheet:

e-mail (competent person):

sicherheit@carlroth.de

#### 1.4 Emergency telephone number

## **SECTION 2: Hazards identification**

#### 2.1 Classification of the substance or mixture

#### Classification according to Regulation (EC) No 1272/2008 (CLP)

Section	Hazard class	Cat- egory	Hazard class and category	Hazard statement
2.16	Substance or mixture corrosive to metals	1	Met. Corr. 1	H290
3.2	Skin corrosion/irritation	2	Skin Irrit. 2	H315
3.3	Serious eye damage/eye irritation	2	Eye Irrit. 2	H319
3.8R	Specific target organ toxicity - single exposure (respirat- ory tract irritation)	3	STOT SE 3	H335

For full text of abbreviations: see SECTION 16

according to Regulation (EC) No. 1907/2006 (REACH)



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#### 2.2 Label elements

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

Signal word Warning

**Pictograms** 

GHS05, GHS07



## **Hazard statements**

H290	May be corrosive to metals
H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation

#### **Precautionary statements**

#### **Precautionary statements - prevention**

P261	Avoid breathing mist/vapours/spray
P280	Wear protective gloves/eye protection

#### **Precautionary statements - response**

P304+P340 P305+P351+P338	IF ON SKIN: Wash with plenty of water IF INHALED: Remove person to fresh air and keep comfortable for breathing IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
	Call a POISON CENTRE/doctor if you feel unwell

#### Hazardous ingredients for labelling:

Hydrochloric acid .... %

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

Signal word: Warning

Symbol(s)

Hydrochloric acid .... %

# contains: 2.3 Other hazards

#### Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

according to Regulation (EC) No. 1907/2006 (REACH)



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# **SECTION 3: Composition/information on ingredients**

#### 3.1 **Substances**

not relevant (mixture)

#### 3.2 **Mixtures**

#### **Description of the mixture**

Name of sub- stance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Notes
Hydrochloric acid %	CAS No 7647-01-0 EC No 231-595-7 Index No 017-002-01-X REACH Reg. No 01-2119484862- 27-xxxx	16-<19	Met. Corr. 1 / H290 Skin Corr. 1B / H314 Eye Dam. 1 / H318 STOT SE 3 / H335		B(a) GHS-HC IOELV

#### Notes

The classification refers to an aqueous solution B(a):

GHS-HC: Harmonised classification (the classification of the substance corresponds to the entry in the list according to 1272/ 2008/EC, Annex VI) IOELV: Substance with a community indicative occupational exposure limit value

Name of sub- stance	Identifier	Specific Conc. Limits	<b>M-Factors</b>	ATE	Exposure route
Hydrochloric acid %	CAS No 7647-01-0 EC No 231-595-7 Index No 017-002-01-X	Met. Corr. 1; H290: C ≥ 0,1 % Skin Corr. 1B; H314: C ≥ 25 % Skin Irrit. 2; H315: 10 % ≤ C < 25 % Eye Dam. 1; H318: C ≥ 25 % Eye Irrit. 2; H319: 10 % ≤ C < 25 % STOT SE 3; H335: C ≥ 10 %	-	-	

For full text of abbreviations: see SECTION 16

# **SECTION 4: First aid measures**

#### 4.1 **Description of first aid measures**



#### **General notes**

Take off immediately all contaminated clothing.

#### **Following inhalation**

Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.

#### Following skin contact

Rinse skin with water/shower. Immediate medical treatment required because corrosive injuries that are not treated are hard to cure. In case of skin irritation, consult a physician.



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#### Following eye contact

Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart. In case of eye irritation consult an ophthalmologist. In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Protect uninjured eye.

#### **Following ingestion**

Rinse mouth immediately and drink plenty of water. Call a physician immediately.

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

Corrosion, Risk of blindness, Gastric perforation, Irritation, Cough, Dyspnoea

# **4.3 Indication of any immediate medical attention and special treatment needed** none

# **SECTION 5: Firefighting measures**

#### 5.1 Extinguishing media



#### Suitable extinguishing media

co-ordinate firefighting measures to the fire surroundings water spray, alcohol resistant foam, dry extinguishing powder, BC-powder, carbon dioxide (CO<sub>2</sub>)

#### Unsuitable extinguishing media

water jet

#### 5.2 Special hazards arising from the substance or mixture

Non-combustible.

#### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus. Wear full chemical protective clothing.

# SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures



#### For non-emergency personnel

Use personal protective equipment as required. Avoid contact with skin, eyes and clothes. Do not breathe vapour/spray.

#### 6.2 Environmental precautions

Keep away from drains, surface and ground water. The product is an acid. Before discharge into sewage plants the product normally needs to be neutralised.

#### 6.3 Methods and material for containment and cleaning up

#### Advice on how to contain a spill

Covering of drains.



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#### Advice on how to clean up a spill

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

#### Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

#### **Reference to other sections** 6.4

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

# SECTION 7: Handling and storage

#### 7.1 **Precautions for safe handling**

Use extractor hood (laboratory). When diluting/dissolving, always have the water ready first, then slowly stir in the product. Provision of sufficient ventilation.

#### Advice on general occupational hygiene

Wash hands before breaks and after work. Keep away from food, drink and animal feedingstuffs.

#### 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed. Keep only in original container.

#### Incompatible substances or mixtures

Observe hints for combined storage.

Consideration of other advice:

#### Specific designs for storage rooms or vessels

Recommended storage temperature: 15 - 25 °C

#### 7.3 Specific end use(s)

No information available.

# **SECTION 8: Exposure controls/personal protection**

#### 8.1 **Control parameters**

#### National limit values

#### **Occupational exposure limit values (Workplace Exposure Limits)**

Cou ntr y	Name of agent	CAS No	Identi- fier	TW A [pp m]	TWA [mg/ m³]	STE L [pp m]	STEL [mg/ m³]	Ceil ing- C [pp m]	Ceil- ing-C [mg/ m³]	Nota- tion	Source
EU	hydrogen chloride	7647-01- 0	IOELV	5	8	10	15				2000/39/ EC
MT	hydrogen chloride	7647-01- 0	OELV	5	8	10	15				CAP. 424

Notation

Ceiling value is a limit value above which exposure should not occur Ceiling-C

Short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified) Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 STEL

TWA hours time-weighted average (unless otherwise specified)



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Relevant DNELs of components of the mixture								
Name of sub- stance	CAS No	End- point	Threshol d level	Protection goal, route of exposure	Used in	Exposure time		
Hydrochloric acid %	7647-01-0	DNEL	8 mg/m³	human, inhalat- ory	worker (industry)	chronic - local ef- fects		
Hydrochloric acid %	7647-01-0	DNEL	15 mg/m³	human, inhalat- ory	worker (industry)	acute - local ef- fects		

#### 8.2 Exposure controls

#### Individual protection measures (personal protective equipment)

#### Eye/face protection



Use safety goggle with side protection.

#### Skin protection



#### hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. 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. The times are approximate values from measurements at 22 ° C and permanent contact. Increased temperatures due to heated substances, body heat etc. and a reduction of the effective layer thickness by stretching can lead to a consider-able reduction of the breakthrough time. If in doubt, contact manufacturer. At an approx. 1.5 times larger / smaller layer thickness, the respective breakthrough time is doubled / halved. The data apply only to the pure substance. When transferred to substance mixtures, they may only be considered as a guide.

#### • type of material

NBR (Nitrile rubber)

material thickness

>0,3 mm

#### • breakthrough times of the glove material

>480 minutes (permeation: level 6)

#### • other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

#### **Respiratory protection**





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Respiratory protection necessary at: Aerosol or mist formation. Type: E (against acidic gases like sulphur dioxide or hydrogen chloride, colour code: Yellow).

#### **Environmental exposure controls**

Keep away from drains, surface and ground water.

# **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	not determined			
	Boiling point or initial boiling point and boiling range	85 °C			
	Flammability	non-combustible			
	Lower and upper explosion limit	not determined			
	Flash point	not determined			
	Auto-ignition temperature	not determined			
	Decomposition temperature	not relevant			
	pH (value)	1 (20 °C)			
	Kinematic viscosity	not determined			
	Solubility(ies)				
	Water solubility	miscible in any proportion			
	Partition coefficient				
	Partition coefficient n-octanol/water (log value):	not relevant (inorganic)			
	Vapour pressure	not determined			
	Density	1,082 <sup>g</sup> / <sub>cm³</sub> at 20 °C			
	Relative vapour density	information on this property is not available			
	Particle characteristics	not relevant (liquid)			
	Other safety parameters				
	Oxidising properties	none			
9.2	Other information				
	Information with regard to physical hazard classes:				

according to Regulation (EC) No. 1907/2006 (REACH)



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Corrosive to metals

category 1: corrosive to metals

Other safety characteristics:

Miscibility

completely miscible with water

# SECTION 10: Stability and reactivity

#### 10.1 Reactivity

Substance or mixture corrosive to metals.

#### **10.2** Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

#### 10.3 Possibility of hazardous reactions

**Dangerous/dangerous reactions with:** strong oxidiser, Aldehydes, Aluminium, Amines, Carbide, Fluorine, Metals, Permanganates, Strong alkali, **Danger of explosion:** Alkali metals, Sulphuric acid, concentrated

#### 10.4 Conditions to avoid

Keep away from heat.

#### 10.5 Incompatible materials

different metals

#### Release of flammable materials with

Metals, Light metals (due to the release of hydrogen in an acid/alkaline medium)

#### **10.6** Hazardous decomposition products

Hazardous combustion products: see section 5.

## **SECTION 11: Toxicological information**

#### 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Test data are not available for the complete mixture.

#### **Classification procedure**

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

#### Classification according to GHS (1272/2008/EC, CLP)

#### Acute toxicity

Shall not be classified as acutely toxic.

#### Skin corrosion/irritation

Causes skin irritation.

#### Serious eye damage/eye irritation

Causes serious eye irritation.

#### **Respiratory or skin sensitisation**

Shall not be classified as a respiratory or skin sensitiser.

#### Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.



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#### Carcinogenicity

Shall not be classified as carcinogenic.

#### **Reproductive toxicity**

Shall not be classified as a reproductive toxicant.

#### Specific target organ toxicity - single exposure

May cause respiratory irritation.

#### Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

#### **Aspiration hazard**

Shall not be classified as presenting an aspiration hazard.

#### Symptoms related to the physical, chemical and toxicological characteristics

#### • If swallowed

Data are not available.

#### • If in eyes

Causes serious eye irritation

#### • If inhaled

Irritation to respiratory tract, cough, Dyspnoea, pulmonary oedema

#### • If on skin

causes skin irritation

#### Other information

Other adverse effects: Circulatory collapse, Cardiac arrhythmias, Symptoms can occur only after several hours

#### **11.2** Endocrine disrupting properties

None of the ingredients are listed.

#### **11.3** Information on other hazards

There is no additional information.

# **SECTION 12: Ecological information**

#### 12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

#### **Biodegradation**

The methods for determining the biological degradability are not applicable to inorganic substances.

#### 12.2 Process of degradability

Data are not available.

#### 12.3 Bioaccumulative potential

Data are not available.

#### 12.4 Mobility in soil

Data are not available.



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- **12.5 Results of PBT and vPvB assessment** Data are not available.
- **12.6 Endocrine disrupting properties** None of the ingredients are listed.
- **12.7 Other adverse effects** Data are not available.

# **SECTION 13: Disposal considerations**

#### 13.1 Waste treatment methods



This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

#### Sewage disposal-relevant information

Do not empty into drains.

#### Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used.

#### 13.2 Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process. Waste catalogue ordinance (Germany).

#### 13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions.

# **SECTION 14: Transport information**

#### 14.1 UN number or ID number

	ADR/RID/ADN	UN 1789
	IMDG-Code	UN 1789
	ICAO-TI	UN 1789
14.2	UN proper shipping name	
	ADR/RID/ADN	HYDROCHLORIC ACID
	IMDG-Code	HYDROCHLORIC ACID
	ICAO-TI	Hydrochloric acid
14.3	Transport hazard class(es)	
	ADR/RID/ADN	8
	IMDG-Code	8
	ICAO-TI	8
14.4	Packing group	
	ADR/RID/ADN	II

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	IMDG-Code	II
	ICAO-TI	II
14.5	Environmental hazards	non-environmentally hazardous acc. to the dan- gerous goods regulations
14.6	Special precautions for user	
	Provisions for dangerous goods (ADR) should	be complied within the premises.
14.7	Maritime transport in bulk according to IM	
	The cargo is not intended to be carried in bulk	κ.
14.8	Information for each of the UN Model Regu	llations
	Transport of dangerous goods by road, rail information	and inland waterway (ADR/RID/ADN) - Additional
	Proper shipping name	HYDROCHLORIC ACID
	Particulars in the transport document	UN1789, HYDROCHLORIC ACID, 8, II, (E)
	Classification code	C1
	Danger label(s)	8
	Special provisions (SP)	520
	Excepted quantities (EQ)	E2
	Limited quantities (LQ)	1 L
	Transport category (TC)	2
	Tunnel restriction code (TRC)	E
	Hazard identification No	80
	International Maritime Dangerous Goods C	code (IMDG) - Additional information
	Proper shipping name	HYDROCHLORIC ACID
	Particulars in the shipper's declaration	UN1789, HYDROCHLORIC ACID, 8, II
	Marine pollutant	-
	Danger label(s)	8
	Excepted quantities (EQ)	E2
	Limited quantities (LQ)	1 L
	EmS	F-A, S-B
	Stowage category	С
	Segregation group	1 - Acids

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International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information					
Proper shipping name	Hydrochloric acid				
Particulars in the shipper's declaration	UN1789, Hydrochloric acid, 8, II				
Danger label(s)	8				
Special provisions (SP)	A3				
Excepted quantities (EQ)	E2				
Limited quantities (LQ)	0,5 L				

# **SECTION 15: Regulatory information**

#### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture Relevant provisions of the European Union (EU)

#### **Restrictions according to REACH, Annex XVII**

Dangerous substances with restrictions (REACH, Annex XVII)				
Name of substance	Name acc. to inventory	CAS No	Restriction	No
Hydrochloric acid	this product meets the criteria for classification in accordance with Reg- ulation No 1272/2008/EC		R3	3
Hydrochloric acid %	substances in tattoo inks and perman- ent make-up		R75	75

#### Legend R3

1. Shall not be used in:

- ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,

tricks and jokes,

- games for one or more participants, or any article intended to be used as such, even with ornamental aspects, 2. Articles not complying with paragraph 1 shall not be placed on the market. 3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume,

or both, if they

can be used as fuel in decorative oil lamps for supply to the general public, and
 present an aspiration hazard and are labelled with H304.

4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN)

5. Without prejudice to the implementation of other Union provisions relating to the classification, labelling and pack-aging of substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met:

(a) lamp oils, labelled with H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: "Keep lamps filled with this liquid out of the reach of children"; and, by 1 December 2010, "Just a sip of lamp oil – or even sucking the wick of lamps – may lead to life-threatening lung damage";
(b) grill lighter fluids, labelled with H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: 'Just a sip of grill lighter fluid may lead to life threatening lung damage';
(c) lamps oils and grill lighters, labelled with H304, intended for supply to the general public are packaged in black and grill lighters, labelled with H304 intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.';



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8. Mixtures that do not contain the statement "Mixture for use in tattoos or permanent make-up" shall not be used for tattooing purposes.

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#### Legend

9. This entry does not apply to substances that are gases at temperature of 20 °C and pressure of 101,3 kPa, or generate a vapour pressure of more than 300 kPa at temperature of 50 °C, with the exception of formaldehyde (CAS No 50-00-0, EC No 200-001-8).

10. This entry does not apply to the placing on the market of a mixture for use for tattooing purposes, or to the use of a mixture for tattooing purposes, when placed on the market exclusively as a medical device or an accessory to a medical device, within the meaning of Regulation (EU) 2017/745, or when used exclusively as a medical device or an accessory to a medical device, within the same meaning. Where the placing on the market or use may not be exclusively as a medical device or an accessory to a medical device or an accessory to a medical device, within the same meaning. Where the placing on the market or use may not be exclusively as a medical device or an accessory to a medical device, the requirements of Regulation (EU) 2017/745 and of this Regulation shall apply cumulatively.

#### List of substances subject to authorisation (REACH, Annex XIV)/SVHC - candidate list

None of the ingredients are listed. (Or Concentration of the substance in a mixture: <0.1 % Mass concentration)

#### **Seveso Directive**

2012/18/EU (Seveso III)			
Νο	Dangerous substance/hazard categories	Qualifying quantity (tonnes) for the ap- plication of lower and upper-tier re- quirements	Notes
	not assigned		

#### **Deco-Paint Directive**

VOC content	0 % , 0 <sup>g</sup> /ı
	, •

#### Industrial Emissions Directive (IED)

VOC content	0 %
VOC content Water content was discounted	0 g/l

# Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

none of the ingredients are listed

# Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

none of the ingredients are listed

## Water Framework Directive (WFD)

none of the ingredients are listed

#### Regulation on the marketing and use of explosives precursors

none of the ingredients are listed

#### Regulation on drug precursors

Name of substance	CAS No	Classification	CN Code	Threshold level
Hydrochloric acid %	7647-01-0	Category 3	2806 10 00	

#### Regulation on substances that deplete the ozone layer (ODS)

none of the ingredients are listed

#### Regulation concerning the export and import of hazardous chemicals (PIC)

according to Regulation (EC) No. 1907/2006 (REACH)



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none of the ingredients are listed

#### **Regulation on persistent organic pollutants (POP)**

none of the ingredients are listed

#### **Other information**

Directive 94/33/EC on the protection of young people at work. Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

#### UN Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances

Name of substance	CAS No	Listed in	HS code
Hydrochloric acid %	7647-01-0	Table II	2806.10

#### National inventories

Country	Inventory	Status
AU	AICS	all ingredients are listed
CA	DSL	all ingredients are listed
CN	IECSC	all ingredients are listed
EU	ECSI	all ingredients are listed
EU	REACH Reg.	all ingredients are listed
JP	CSCL-ENCS	all ingredients are listed
KR	KECI	all ingredients are listed
MX	INSQ	all ingredients are listed
NZ	NZIoC	all ingredients are listed
PH	PICCS	all ingredients are listed
TR	CICR	not all ingredients are listed
TW	TCSI	all ingredients are listed
US	TSCA	all ingredients are listed

#### Legend

AICSAustralian Inventory of Chemical SubstancesCICRChemical Inventory and Control RegulationCSCL-ENCSList of Existing and New Chemical Substances (CSCL-ENCS)DSLDomestic Substances List (DSL)ECSIEC Substance Inventory (EINECS, ELINCS, NLP)IECSCInventory of Existing Chemical SubstancesINSQNational Inventory of Chemical SubstancesKECIKorea Existing Chemicals InventoryNZIoCNew Zealand Inventory of Chemicals and Chemical Substances (PICCS)REACH Reg.REACH registered substancesTCSITaiwan Chemical Substance InventoryTSCAToxic Substance Control Act

#### 15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

according to Regulation (EC) No. 1907/2006 (REACH)



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# **SECTION 16: Other information**

### Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
2000/39/EC	Commission Directive establishing a first list of indicative occupational exposure limit values in imple- mentation of Council Directive 98/24/EC
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de naviga- tion intérieures (European Agreement concerning the International Carriage of Dangerous Goods by In- land Waterways)
ADR	Accord relatif au transport international des marchandises dangereuses par route (Agreement concern- ing the International Carriage of Dangerous Goods by Road)
ADR/RID/ADN	Agreements concerning the International Carriage of Dangerous Goods by Road/Rail/Inland Waterways (ADR/RID/ADN)
ATE	Acute Toxicity Estimate
CAP. 424	Occupational Health and Safety Authority Act (CAP. 424)
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	Ceiling value
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
CN Code	Combined Nomenclature
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an ident fier of substances commercially available within the EU (European Union)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Na- tions
HS	Harmonized Commodity Description and Coding System (Harmonized System, drawn up by the World Customs Organisation)
ΙΑΤΑ	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
ICAO-TI	Technical instructions for the safe transport of dangerous goods by air
IMDG	International Maritime Dangerous Goods Code
IMDG-Code	International Maritime Dangerous Goods Code
index No	The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
IOELV	Indicative occupational exposure limit value
Met. Corr.	Substance or mixture corrosive to metals

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Abbr.	Descriptions of used abbreviations
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regula- tions concerning the International carriage of Dangerous goods by Rail)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
STEL	Short-term exposure limit
STOT SE	Specific target organ toxicity - single exposure
SVHC	Substance of Very High Concern
TWA	Time-weighted average
VOC	Volatile Organic Compounds
vPvB	Very Persistent and very Bioaccumulative

#### Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures. Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU.

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

#### **Classification procedure**

Physical and chemical properties. The classification is based on tested mixture. Health hazards. Environmental hazards. The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

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Code	Text
H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

#### List of relevant phrases (code and full text as stated in chapter 2 and 3)

#### Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.