Uses advised against:

Relevant identified uses:

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):

Emergency telephone number 1.4

Name	Street	Postal code/city	Telephone	Website
National Poisons Information Service City Hospital	Dudley Rd	B187QH Birmingham	844 892 0111	

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification acc. to GHS

Safety data sheet Safety data sheet

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

Acetic acid D4 99,5 Atom%D

article number: HN83 Version: 2.0 en Replaces version of: 2019-10-14 Version: (1)

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

1.1	Product identifier				
	Identification of the substance				

Identification of the substance	Acetic acid D4 99,5 Atom%D				
Article number	HN83				
EC number	214-693-4				
CAS number	1186-52-3				

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

Laboratory chemical Laboratory and analytical use

Do not use for squirting or spraying. Do not use for products which come into direct contact with the skin. Do not use for products which come into contact with foodstuffs. Do not use for private purposes (household).

Details of the supplier of the safety data sheet 1.3

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



date of compilation: 2019-10-14



sicherheit@carlroth.de

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



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Section	Hazard class	Cat- egory	Hazard class and category	Hazard statement
2.6	Flammable liquid	3	Flam. Liq. 3	H226
3.2	Skin corrosion/irritation	1A	Skin Corr. 1A	H314
3.3	Serious eye damage/eye irritation	1	Eye Dam. 1	H318

For full text of abbreviations: see SECTION 16

The most important adverse physicochemical, human health and environmental effects

Skin corrosion produces an irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis. The product is combustible and can be ignited by potential ignition sources.

2.2 Label elements

Labelling

Signal word Danger

Pictograms

GHS02, GHS05



Hazard statements

H226	Flammable liquid and vapour
H314	Causes severe skin burns and eye damage

Precautionary statements

Precautionary statements - prevention

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P280 Wear protective gloves/eye protection

Precautionary statements - response

P301+P330+P331 P303+P361+P353	IF SWALLOWED: rinse mouth. Do NOT induce vomiting 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

2.3 Other hazards

Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

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



Acetic acid D4 99,5 Atom%D

article number: HN83

3.1

SECTION 3: Composition/information on ingredients

Substances	
Name of substance	Acetic acid D4
Molecular formula	$C_2D_4O_2$
Molar mass	64,08 ^g / _{mol}
CAS No	1186-52-3
EC No	214-693-4

Substance, Specific Conc. Limits, M-factors, ATE									
	Specific Conc. Limits	M-Factors	ATE	Exposure route					
	Skin Corr. 1A; H314: C ≥ 90 % Skin Corr. 1B; H314: 25 % ≤ C < 90 % Skin Irrit. 2; H315: 10 % ≤ C < 25 % Eye Dam. 1; H318: C ≥ 25 % Eye Irrit. 2; H319: 10 % ≤ C < 25 %	-	-						

SECTION 4: First aid measures

4.1 Description of first aid measures



General notes

Take off immediately all contaminated clothing. Self-protection of the first aider.

Following inhalation

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

Following skin contact

After contact with skin, wash immediately with plenty of water. Immediate medical treatment required because corrosive injuries that are not treated are hard to cure.

Following eye contact

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. 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

Following inhalation: Irritant effects, Cough, pain, choking, and breathing difficulties, Following skin contact: Causes severe burns, Causes poorly healing wounds, After eye contact: Risk of serious damage to eyes, Risk of blindness, Following ingestion: Corrosion, Gastric perforation

4.3 Indication of any immediate medical attention and special treatment needed

none

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



Acetic acid D4 99,5 Atom%D

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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 (CO₂)

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Combustible. In case of insufficient ventilation and/or in use, may form flammable/explosive vapourair mixture. Solvent vapours are heavier than air and may spread along floors. Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures. Vapours are heavier than air, spread along floors and form explosive mixtures with air. Vapours may form explosive mixtures with air.

Hazardous combustion products

In case of fire may be liberated: Carbon monoxide (CO), Carbon dioxide (CO₂)

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. Avoidance of ignition sources.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Danger of explosion.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains.

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.

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



Acetic acid D4 99,5 Atom%D

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6.4 Reference to other sections

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

Provision of sufficient ventilation. Use extractor hood (laboratory). Handle and open container with care. Clear contaminated areas thoroughly.

Measures to prevent fire as well as aerosol and dust generation



Keep away from sources of ignition - No smoking.

Take precautionary measures against static discharge.

Advice on general occupational hygiene

Wash hands before breaks and after work. Keep away from food, drink and animal feedingstuffs. When using do not smoke.

7.2 Conditions for safe storage, including any incompatibilities

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

Incompatible substances or mixtures

Observe hints for combined storage.

Consideration of other advice:

Ground/bond container and receiving equipment.

Ventilation requirements

Use local and general ventilation.

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	acetic acid	64-19-7	IOELV	10	25	20	50				2017/ 164/EU

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

Acetic acid D4 99,5 Atom%D

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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
GB	acetic acid	64-19-7	WEL	10	25	20	50				EH40/ 2005

TWA

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

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

hours time-weighted average (unless otherwise specified)

8.2 **Exposure controls**

Individual protection measures (personal protective equipment)

Eye/face protection



Use safety goggle with side protection. Wear face protection.

Skin protection



hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. 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 considerable 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

Butyl caoutchouc (butyl rubber)

material thickness

0,7mm

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.

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

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Respiratory protection



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 - like: - Acetic acid
Melting point/freezing point	17 °C
Boiling point or initial boiling point and boiling range	116 – 118 °C at 1.013 hPa
Flammability	flammable liquid in accordance with GHS criteria
Lower and upper explosion limit	4 vol% (LEL) - 16 vol% (UEL)
Flash point	39 °C
Auto-ignition temperature	485 °C
Decomposition temperature	not relevant
pH (value)	2,5 (in aqueous solution: 50 ^g / _l , 20 °C)
Kinematic viscosity	1,089 ^{mm²} / _s at 20 °C
Dynamic viscosity	1,22 mPa s at 20 °C
Solubility(ies)	
Water solubility	miscible in any proportion
Partition coefficient	
Partition coefficient n-octanol/water (log value):	-0,17 (exp.)
Vapour pressure	15 hPa at 20 °C
Density and/or relative density	
Density	1,12 ^g / _{cm³}
Relative vapour density	2,21 (air = 1)
Particle characteristics	not relevant (liquid)



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

Acetic acid D4 99,5 Atom%D

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Other safety parameters Oxidising properties

9.2 Other information

Information with regard to physical hazard classes:

Other safety characteristics:

Miscibility

completely miscible with water

There is no additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity

It's a reactive substance. Risk of ignition.

If heated

Risk of ignition. Vapours may form explosive mixtures with air.

10.2 Chemical stability

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

none

10.3 Possibility of hazardous reactions

Danger of explosion: Peroxides, Perchlorates, Hydrogen peroxide, Chromium(VI) oxide, Permanganates, for example potassium permanganate, strong oxidiser, **Violent reaction with:** Strong alkali, Aldehydes, Alkali hydroxide (caustic alkali), Alcohols, Nitric acid

10.4 Conditions to avoid

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

10.5 Incompatible materials

different plastics, Rubber articles, iron, copper, bronze, brass, zinc

Release of flammable materials with

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 toxicological effects

Classification acc. to GHS

Acute toxicity

Shall not be classified as acutely toxic.

Skin corrosion/irritation

Causes severe skin burns and eye damage.

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

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

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Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

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

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

If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects)

• If in eyes

causes burns, Causes serious eye damage, risk of blindness

If inhaled

irritant effects, cough, pain, choking, and breathing difficulties

• If on skin

causes severe burns, causes poorly healing wounds

• Other information

none

11.2 Endocrine disrupting properties

Not 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

Data are not available.

12.2 Process of degradability

Theoretical Carbon Dioxide: 1,374 ^{mg}/_{mg}

12.3 Bioaccumulative potential

Does not significantly accumulate in organisms.

n-octanol/water (log KOW)

-0,17 (Exp.)

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

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- 12.4 Mobility in soil
 - Data are not available.
- **12.5 Results of PBT and vPvB assessment** Data are not available.
- **12.6 Endocrine disrupting properties** Not 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.

Properties of waste which render it hazardous

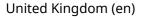
- HP 3 flammable
- **HP 4** irritant skin irritation and eye damage corrosive
- 13.3 Remarks

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

	ADRRID	UN 2789
	IMDG-Code	UN 2789
	ICAO-TI	UN 2789
14.2	UN proper shipping name	
	ADRRID	ACETIC ACID, GLACIAL
	IMDG-Code	ACETIC ACID, GLACIAL
	ICAO-TI	Acetic acid, glacial
14.3	Transport hazard class(es)	





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

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	ADRRID	8 (3)
	IMDG-Code	8 (3)
	ICAO-TI	8 (3)
14.4	Packing group	
	ADRRID	II
	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 IMO instruments

The cargo is not intended to be carried in bulk.

14.8 Information for each of the UN Model Regulations

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN) - Additional
information

Proper shipping name	ACETIC ACID, GLACIAL
Particulars in the transport document	UN2789, ACETIC ACID, GLACIAL, 8 (3), II, (D/E)
Classification code	CF1
Danger label(s)	8+3
Excepted quantities (EQ)	E2
Limited quantities (LQ)	1 L
Transport category (TC)	2
Tunnel restriction code (TRC)	D/E
Hazard identification No	83
Emergency Action Code	2P
Regulations concerning the International Carr information	iage of Dangerous Goods by Rail (RID)Additional
Classification code	CF1
Danger label(s)	8+3
Excepted quantities (EQ)	E2
Limited quantities (LQ)	1 L
Transport category (TC)	2

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

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Acetic acid D4 99,5 Atom%D

article	number:	HN83
alucie	number.	LINOD

Hazard identification No	83				
International Maritime Dangerous Goods Cod	International Maritime Dangerous Goods Code (IMDG) - Additional information				
Proper shipping name	ACETIC ACID, GLACIAL				
Particulars in the shipper's declaration	UN2789, ACETIC ACID, GLACIAL, 8 (3), II, 39°C c.c.				
Marine pollutant	-				
Danger label(s)	8+3				
Excepted quantities (EQ)	E2				
Limited quantities (LQ)	1 L				
EmS	F-E, S-C				
Stowage category	A				
Segregation group	1 - Acids				
International Civil Aviation Organization (ICA	O-IATA/DGR) - Additional information				
Proper shipping name	Acetic acid, glacial				
Particulars in the shipper's declaration	UN2789, Acetic acid, glacial, 8 (3), II				
Danger label(s)	8+3				
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)

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
P5c	flammable liquids (cat. 2, 3)	5.000	50.000	51)

Notation

51) Flammable liquids, categories 2 or 3 not covered by P5a and P5b

Deco-Paint Directive

VOC content	100 %
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Industrial Emissions Directive (IED)

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

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VOC content 100 %			
Directive on the restriction of th electronic equipment (RoHS)	e use of certain hazardous substance	es in electrical	and
not listed			
Regulation concerning the estat Register (PRTR)	blishment of a European Pollutant Re	lease and Tran	sfer
not listed			
Water Framework Directive (WF not listed	D)		
Regulation on the marketing an not listed	d use of explosives precursors		
Regulation on drug precursors not listed			
Regulation on substances that d not listed	eplete the ozone layer (ODS)		
Regulation concerning the expo	rt and import of hazardous chemicals	s (PIC)	
Regulation on persistent organion not listed	c pollutants (POP)		
National regulations(GB)			
List of substances subject to aut not listed	horisation (GB REACH, Annex 14) / SV	HC - candidate	e list
Restrictions according to GB REA	ACH, Annex 17		
Dangerous substances with res	trictions (GB REACH, Annex 17)		
Name of substance	Name acc. to inventory	CAS No	No
Acetic acid D4	this product meets the criteria for classi- fication in accordance with Regulation No 1272/2008/EC		3

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.

National inventories

Country	Inventory	Status
EU	ECSI	substance is listed
NZ	NZIoC	substance is listed
TW	TCSI	substance is listed
Logond		

Legend ECSI NZIoC

EC Substance Inventory (EINECS, ELINCS, NLP) New Zealand Inventory of Chemicals

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

Acetic acid D4 99,5 Atom%D

article number: HN83

Legend TCSI

Taiwan Chemical Substance Inventory

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance.

SECTION 16: Other information

Indication of changes (revised safety data sheet)

Alignment to regulation: Restructuring: section 9, section 14

Section	Former entry (text/value)	Actual entry (text/value)	Safety- relev- ant
2.1		Classification acc. to GHS: change in the listing (table)	yes
2.1		The most important adverse physicochemical, human health and environmental effects: Skin corrosion produces an irreversible dam- age to the skin; namely, visible necrosis through the epidermis and into the dermis. The product is combustible and can be ignited by potential ignition sources.	yes
2.2	Labelling of packages where the contents do not exceed 125 ml: Signal word: Danger		yes
2.2		Labelling of packages where the contents do not exceed 125 ml: change in the listing (table)	yes
2.2		Labelling of packages where the contents do not exceed 125 ml: change in the listing (table)	yes
2.2		Labelling of packages where the contents do not exceed 125 ml: change in the listing (table)	yes
2.3	Other hazards: There is no additional information.	Other hazards	yes
2.3		Results of PBT and vPvB assessment: According to the results of its assessment, this substance is not a PBT or a vPvB.	yes

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
2017/164/EU	Commission Directive establishing a fourth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC, and amending Commission Directives 91/322/EEC, 2000/39/EC and 2009/ 161/EU
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)
ATE	Acute Toxicity Estimate
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)



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



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Abbr.	Descriptions of used abbreviations	
Ceiling-C	Ceiling value	
DGR	Dangerous Goods Regulations (see IATA/DGR)	
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identi- fier of substances commercially available within the EU (European Union)	
EH40/2005	EH40/2005 Workplace exposure limits (http://www.nationalarchives.gov.uk/doc/open-government-li- cence/)	
EINECS	European Inventory of Existing Commercial Chemical Substances	
ELINCS	European List of Notified Chemical Substances	
EmS	Emergency Schedule	
GB REACH	The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended)	
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Na- tions	
IATA	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	
IOELV	Indicative occupational exposure limit value	
LEL	Lower explosion limit (LEL)	
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)	
STEL	Short-term exposure limit	
TWA	Time-weighted average	
UEL	Upper explosion limit (UEL)	
VOC	Volatile Organic Compounds	
vPvB	Very Persistent and very Bioaccumulative	
WEL	Workplace exposure limit	

Key literature references and sources for data

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). Regulations concerning the International Carriage of Dangerous Goods by Rail (RID). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

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



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

Code	Text
H226	Flammable liquid and vapour.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.

Disclaimer

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