

acc. to Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU

## Ammoniaklösung 25 %

Version number: 3.0 Revision: 02.08.2023

Replaces version of: 30.07.2021 (2)

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

#### 1.1 Product identifier

Identification of the substance Ammoniaklösung 25 % Registration number (REACH) 01-2119982985-14-xxxx

EC number 215-647-6
Index number in CLP Annex VI 007-001-01-2
CAS number 1336-21-6

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

Relevant identified uses Industrial use

Do not use for squirting or spraying. Do not use for products which come into direct contact with the skin.

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

FRIEDRICH SCHARR KG Liebknechtstraße 50 70565 Stuttgart Germany

Telephone: +49 711 7868-0 Telefax: +49 711 7868-489 e-mail: info@scharr.de Website: www.scharr.de

e-mail (competent person) produktsicherheit@scharr.de

#### 1.4 Emergency telephone number

Poison centre			
Country	Name	Postal code/city	Telephone
Germany	Giftinformation Freiburg	79106 Freiburg im Bre- isgau	+49 (0)761 19240

#### **SECTION 2: Hazards identification**

#### 2.1 Classification of the substance or mixture

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

Hazard class	Category	Hazard class and cat- egory	Hazard state- ment
skin corrosion/irritation	1A	Skin Corr. 1A	H314
specific target organ toxicity - single exposure (respiratory tract irritation)	3	STOT SE 3	H335
hazardous to the aquatic environment - chronic hazard	3	Aquatic Chronic 3	H412

For full text of abbreviations: see SECTION 16.

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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. Spillage and fire water can cause pollution of watercourses.

#### 2.2 Label elements

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

- signal word danger

- pictograms

GHS05, GHS07



#### - hazard statements

H314 Causes severe skin burns and eye damage.

H335 May cause respiratory irritation.

H412 Harmful to aquatic life with long lasting effects.

#### - precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protec-

tion/....

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.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P501 Dispose of contents/container to industrial combustion plant.

#### 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.

Endocrine disrupting properties

Does not contain an endocrine disruptor (EDC) in a concentration of  $\geq 0.1\%$ .

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

#### 3.1 Substances

Name of substance ammonia, aqueous solution

Identifiers

REACH Reg. No 01-2119982985-14-xxxx

EC No 215-647-6
CAS No 1336-21-6
Index No 007-001-01-2
Purity 10 – 24,9 %

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#### **SECTION 4: First aid measures**

#### 4.1 Description of first aid measures

#### General notes

Do not leave affected person unattended. Remove victim out of the danger area. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth. Self-protection of the first aider.

#### Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. In case of respiratory tract irritation, consult a physician. Provide fresh air.

#### Following skin contact

Call a physician in any case.

#### Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart. Call a physician immediately.

#### Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting. Call a physician immediately.

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

Breathing difficulties. Headache. Vertigo.

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

Subsequent observance for pneumonia and pulmonary oedema. Supervise the blood circulation.

#### **SECTION 5: Firefighting measures**

#### 5.1 Extinguishing media

Suitable extinguishing media

Water spray, BC-powder, Carbon dioxide (CO2), Sand

Unsuitable extinguishing media

Water jet

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

Danger of bursting container.

Hazardous combustion products

Nitrogen oxides (NOx), Carbon monoxide (CO), Carbon dioxide (CO2)

#### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

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#### **SECTION 6: Accidental release measures**

#### 6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety. Ventilate affected area. Avoidance of ignition sources.

For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases. Provision of sufficient ventilation.

#### 6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it. If substance has entered a water course or sewer, inform the responsible authority.

#### 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

Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage: sawdust, kieselgur (diatomite), sand, universal binder

Appropriate containment techniques

Neutralisation techniques. Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

#### 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

Recommendations

- measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Use only in well-ventilated areas.

- handling of incompatible substances or mixtures

Do not mix with acids.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

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

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- Lagerklasse (storage class according to TRGS 510, 8 B (non-combustible corrosive materials (except Germany) only corrosive to metals))
- packaging compatibilities
  Only packagings which are approved (e.g. acc. to ADR) may be used.

#### 7.3 Specific end use(s)

See section 16 for a general overview.

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

#### 8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)

Coun- try	Name of sub- stance	CAS No	Identifi- er	TWA [ppm]	TWA [mg/ m³]	STEL [ppm]	STEL [mg/ m³]	Source
AT	ammonia, aqueous solution	7664-41-7	MAK	20	14	50	36	GKV
СН	ammonia, aqueous solution	7664-41-7	MAK	20	14	40	28	SUVA
DE	ammonia, aqueous solution	7664-41-7	MAK	20	14	40	28	DFG
DE	ammonia, aqueous solution	7664-41-7	AGW	20	14	40	28	TRGS 900
EU	ammonia, aqueous solution	7664-41-7	IOELV	20	14	50	36	2000/39/EC

#### Notation

STEL

short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute peri-

od (unless otherwise specified)

TWA

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

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/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. In the case of wanting to use the gloves again, clean them before taking off and air them well. 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.

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- type of material

IIR: isobutene-isoprene (butyl) rubber, FKM: fluoro-elastomer

- material thickness IIR 0,7 mm FKM 0,4 mm

- breakthrough times of the glove material 0,4 mm

>480 minutes (permeation: level 6)

- protective gloves - splash protection

Type of material IIR: isobutene-isoprene (butyl) rubber

FKM: fluoro-elastomer

- other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

Respiratory protection

[In case of inadequate ventilation] wear respiratory protection. Combination filtering device (EN 141).

Environmental exposure controls

Use appropriate container to avoid environmental contamination. 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	-56 °C
Boiling point or initial boiling point and boiling range	38 °C at 1.013 bar
Evaporation rate	not determined
Flammability	non-combustible
Lower and upper explosion limit	15 vol% - 28 vol%
Flash point	not determined
Auto-ignition temperature	651 °C
pH (value)	13 (20 °C) (base)

#### Solubility(ies)

Water solubility	miscible in any proportion

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Partition coefficient	
Partition coefficient n-octanol/water (log value)	this information is not available
Vapour pressure	480 hPa at 20 °C
Density and/or relative density	
Density	0,91 <sup>g</sup> / <sub>cm³</sub> at 15 °C
Particle characteristics	not relevant (liquid)
Other information	
Information with regard to physical hazard classes	hazard classes acc. to GHS (physical hazards): not relevant
Other safety characteristics	-

#### other safety characteristics

Miscibility	Completely miscible with water.
Temperature class (EU, acc. to ATEX)	T1 (maximum permissible surface temperature on the equipment: 450°C)

### **SECTION 10: Stability and reactivity**

#### 10.1 Reactivity

9.2

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

#### 10.2 Chemical stability

See below "Conditions to avoid".

#### 10.3 Possibility of hazardous reactions

In case of insufficient ventilation and/or in use, may form flammable/explosive vapour-air mixture.

#### 10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

#### 10.5 Incompatible materials

Acids, Zinc, Heavy metals and their salts, Copper

#### 10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

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#### **SECTION 11: Toxicological information**

# 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008 Classification according to GHS (1272/2008/EC, CLP)

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.

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

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.

#### 11.2 Information on other hazards

There is no additional information.

#### **SECTION 12: Ecological information**

#### 12.1 Toxicity

Acc. to 1272/2008/EC: Harmful to aquatic life with long lasting effects. Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (Ordinance on facilities for handling substances hazardous to water) (AwSV): WGK 2, hazardous to water (Germany)

#### Aquatic toxicity (acute)

Endpoint	Value	Species	Exposure time
LC50	0,75 – 3,4 <sup>mg</sup> / <sub>l</sub>	fish	96 h
EC50	101 <sup>mg</sup> / <sub>l</sub>	daphnia magna	48 h

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#### Biodegradation

Data are not available.

12.2 Persistence and degradability

#### 12.3 Bioaccumulative potential

Data are not available.

#### 12.4 Mobility in soil

Data are not available.

#### 12.5 Results of PBT and vPvB assessment

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

#### 12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (EDC) in a concentration of  $\geq 0.1\%$ .

#### 12.7 Other adverse effects

Data are not available.

#### **SECTION 13: Disposal considerations**

#### 13.1 Waste treatment methods

Waste treatment-relevant information

Recycling/reclamation of other inorganic materials. Regeneration of bases.

#### Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

#### Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

#### 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.

#### **Remarks**

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

#### **SECTION 14: Transport information**

#### 14.1 UN number or ID number

ADR/RID/ADN UN 2672 IMDG-Code UN 2672 ICAO-TI UN 2672

#### 14.2 UN proper shipping name

ADR/RID/ADN AMMONIA SOLUTION IMDG-Code AMMONIA SOLUTION ICAO-TI Ammonia solution

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14.3 Transport hazard class(es)

ADR/RID/ADN 8
IMDG-Code 8
ICAO-TI 8

14.4 Packing group

ADR/RID/ADN III IMDG-Code III ICAO-TI III

**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.

#### **Information for each of the UN Model Regulations**

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

Classification code C5
Danger label(s) 8



Special provisions (SP) 543

Excepted quantities (EQ) E1

Limited quantities (LQ) 5 L

Transport category (TC) 3

Tunnel restriction code (TRC) E

Hazard identification No 80

#### International Maritime Dangerous Goods Code (IMDG) - additional information

Marine pollutant P (hazardous to the aquatic environment)

Danger label(s) 8



Special provisions (SP)

Excepted quantities (EQ) E1
Limited quantities (LQ) 5 L

EmS F-A, S-B

Stowage category A

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Segregation group

18 - Alkalis

#### International Civil Aviation Organization (ICAO-IATA/DGR) - additional information

Danger label(s) 8



Special provisions (SP) A64
Excepted quantities (EQ) E1
Limited quantities (LQ) 1 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)

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

not listed

#### **Seveso Directive**

2012/	2012/18/EU (Seveso III)				
No	Dangerous substance/hazard categories	Qualifying quantity (tonnes) for the application of lower and upper-tier requirements	Notes		
	not assigned				

#### **Industrial Emissions Directive (IED)**

VOC content	0 %
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Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

not listed

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

not listed

#### Water Framework Directive (WFD)

List of po	llutants (	(WFD)
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Name of substance	CAS No	Listed in	Remarks
ammonia, aqueous solution		a)	

Legend

A) Indicative list of the main pollutants

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

not listed

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#### **National regulations (Austria)**

Ordinance on combustible liquids (VbF) not assigned

#### **National regulations (Germany)**

Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (Ordinance on facilities for handling substances hazardous to water) (AwSV)

Wassergefährdungsklasse, WGK

(water hazard class)

2 hazardous to water

Index number 211

#### Technical instructions on air quality control (Germany)

Number	Group of substances	Class	Conc.	Mass flow	Mass concen- tration	Notation
	not assigned		≥ 25 wt%			

#### **National regulations Switzerland**

#### Ordinance on the incentive tax on volatile organic compounds (VOCV)

The product is exempt from the tax. Product in which the VOC content does not exceed 3 per cent (% by weight).

#### **National inventories**

Country	Inventory	Status
AU	AIIC	substance is listed
CA	DSL	substance is listed
CN	IECSC	substance is listed
EU	ECSI	substance is listed
EU	REACH Reg.	substance is listed
JP	CSCL-ENCS	substance is listed
KR	KECI	substance is listed
MX	INSQ	substance is listed
NZ	NZIoC	substance is listed
PH	PICCS	substance is listed
TR	CICR	substance is listed
TW	TCSI	substance is listed
US	TSCA	substance is listed (ACTIVE)
VN	NCI	substance is listed

Legend

NZIoC

Australian Inventory of Industrial Chemicals
Chemical Inventory and Control Regulation
List of Existing and New Chemical Substances (CSCL-ENCS)
Domestic Substances List (DSL)
EC Substance Inventory (EINECS, ELINCS, NLP)
Inventory of Existing Chemical Substances Produced or Imported in China
National Inventory of Chemical Substances
Korea Existing Chemicals Inventory AIIC CICR CSCL-ENCS

DSL ECSI

New Zealand Inventory of Chemicals

**IECSC** 

INSQ Korea Existing Chemicals Inventory KECI National Chemical Inventory

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Legend

Philippine Inventory of Chemicals and Chemical Substances (PICCS) REACH registered substances Taiwan Chemical Substance Inventory Toxic Substance Control Act

PICCS REACH Reg. TCSI TSCA

#### 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)

Section	Former entry (text/value)	Actual entry (text/value)
1.1		Index number in CLP Annex VI: 007-001-01-2
2.3		Endocrine disrupting properties: Does not contain an endocrine disruptor (EDC) in a concentration of ≥ 0,1%.
3.1		Index No: 007-001-01-2
8.2	Breakthrough times of the glove material: >480 minutes (permeation: level 6)	Breakthrough times of the glove material: 0,4 mm
		>480 minutes (permeation: level 6)
8.2	Respiratory protection: In case of inadequate ventilation wear respiratory protection.	Respiratory protection: [In case of inadequate ventilation] wear respiratory protection. Combination filtering device (EN 141).
12.2	Persistence and degradability: Data are not available.	Persistence and degradability
12.5	Results of PBT and vPvB assessment: Data are not available.	Results of PBT and vPvB assessment: According to the results of its assessment, this sub- stance is not a PBT or a vPvB.
12.6	Endocrine disrupting properties: Not listed.	Endocrine disrupting properties: Does not contain an endocrine disruptor (EDC) in a concentration of ≥ 0,1%.

#### **Abbreviations and acronyms**

Abbr.	Descriptions of used abbreviations
2000/39/EC	Commission Directive establishing a first list of indicative occupational exposure limit values in implementation 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 concerning 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)
AGW	Workplace exposure limit
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)

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Abbr.	Descriptions of used abbreviations
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DFG	Deutsche Forschungsgemeinschaft MAK-und BAT-Werte-Liste, Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe, Wiley-VCH, Weinheim
DGR	Dangerous Goods Regulations (see IATA/DGR)
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier 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
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
GKV	Grenzwerteverordnung
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
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
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
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
SUVA	Grenzwerte am Arbeitsplatz, Suva
SVHC	Substance of Very High Concern
TRGS	Technische Regeln für Gefahrstoffe (technical rules for hazardous substances, Germany)
TRGS 900	Arbeitsplatzgrenzwerte (TRGS 900)
TWA	Time-weighted average

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Abbr.	Descriptions of used abbreviations	
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).

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

Code	Text
H314	Causes severe skin burns and eye damage.
H335	May cause respiratory irritation.
H412	Harmful to aquatic life with long lasting effects.

#### Disclaimer

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

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