SAFETY DATA SHEET

according to Regulation (EC) No 1907/2006 (REACH) as amended

brake fluid FORCE DOT-4

Creation date	25. January 2019	Revision no.	1
Revision date	03. March 2017	Version	4

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

1.1. Product identifier

Substance / mixture	mixture
Number	895893 + 8958931

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

mixture's intended use	brake fluid
Mixture uses advised against	The product should not be used in ways other then those referred in Section 1.

1.3. Details of the supplier of the safety data sheet

Distributor

Name or trade name	KCK Cyklosport-Mode s.r.o.
Address	Bartošova 348, Otrokovice - Kvítkovice, 765 02 Czech Republic
Identification number (CRN)	18559751
VAT Reg No	CZ 185 59 751
Phone	+420 577 217 520
E-mail	krejcirik@kckcyklosport.cz
Web address	www.kckcyklosport.cz

Manufacturer

Name or trade name	Nacházel, s.r.o.
Address	Průmyslová 11/1472, Praha 10 - Hostivař, 10219 Czech Republic
Identification number (CRN)	25734458
VAT Reg No	CZ25734458
Phone	222 351 140
E-mail	maziva@nachazel.cz
Web address	www.nachazel.cz

Competent person responsible for the safety data sheet

Name	Ing. Zdeněk Nacházel
E-mail	ing.zdenek@nachazel.cz

1.4. Emergency telephone number

Poisoning information centre, Na Bojišti 1, Praha, Czech Republic, Tel.: non-stop +420 224 919 293 or +420 224 915 402, Information on health risks only - acute poisoning of humans and animals

SECTION 2: Hazards identification

2.1. Substance or mixture classification

Classification of the mixture in accordance with Regulation (EC) No 1272/2008

The mixture is classified as dangerous.

Eye Dam. 1, H318

Full text of all classifications and hazard statements is given in the section 16.

Most serious adverse physico-chemical effects

Unknown

Most serious adverse effects on human health and the environment

Causes serious eye damage.

2.2. Label elements

Hazard pictogram

Signal word

Danger

Hazardous substances

2-[2-(2-Butoxyethoxy)ethoxy]ethanol

Hazard statements

H318	Causes serious eye damage.

Precautionary statements

P102	Keep out of reach of children.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a doctor.
P501	Dispose of contents/container to in accordance with local regulations.

2.3. Other hazards

Substance does not meet the criteria for PBT or vPvB in accordance with Annex XIII of Regulation (EC) No 1272/2008.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Mixture of substances specified below and additives.

Mixture contains these hazardous substances and substances with the highest permissible concentration in the working environment

Identification numbers	Substance name	Content in % weight	Classification according to Regulation (EC) No 1272/2008	Note.
Index: 603-183-00-0 CAS: 143-22-6 EC: 205-592-6 Registration number: 01-2119475107-38	2-[2-(2-Butoxyethoxy)ethoxy]ethanol	25-50	Eye Dam. 1, H318	1
Index: 603-140-00-6 CAS: 111-46-6 EC: 203-872-2 Registration number: 01-2119457857-21	2,2' -oxybisethanol	10-24	Acute Tox. 4, H302	
CAS: 112-27-6 EC: 203-953-2	Triethylenglykol	1-5	Eye Irrit. 2, H319	
Index: 603-096-00-8 CAS: 112-34-5 EC: 203-961-6 Registration number: 01-2119475104-44	2-(2-butoxyethoxy)ethanol	1-5	Eye Irrit. 2, H319	1, 2
Index: 603-083-00-7 CAS: 110-97-4 EC: 203-820-9 Registration number: 01-2119475444-34	1,1'-Iminodipropan-2-ol	1-5	Eye Irrit. 2, H319	

Identification numbers	Substance name	Content in % weight	Classification according to Regulation (EC) No 1272/2008	Note.
CAS: 111-90-0 EC: 203-919-7	2-(-2-Ethoxyethoxy)ethanol	1-5	Eye Irrit. 2, H319	
CAS: 1879-09-0 EC: 217-533-1	6-terc-butyl-2,4-xylenol	<0,1	Acute Tox. 4, H302 Skin Irrit. 2, H315 Skin Sens. 1, H317 Eye Irrit. 2, H319 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	

Notes

1 Substance for which exposure limits of Community for working environment exist.

2 The use of the substance is restricted by Annex XVII of REACH Regulation

Full text of all classifications and hazard statements is given in the section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

Take care of your own safety. If any health problems are manifested or if in doubt, inform a doctor and show him information from this Safety Data Sheet. If unconscious, put the person in the stabilized (recovery) position on his side with his head slightly bent backwards and make sure that airways are free; never induce vomiting. If the person vomits by himself, make sure that the vomit is not inhaled. In life threatening conditions first of all provide resuscitation of the affected person and ensure medical assistance. Respiratory arrest - provide artificial respiration immediately. Cardiac arrest - provide indirect cardiac massage immediately.

Inhalation

Terminate the exposure immediately; move the affected person to fresh air.

Skin contact

Remove contaminated clothes. Wash the affected area with plenty of water, lukewarm if possible. Soap, soap solution or shampoo should be used if there is no skin injury. Provide medical treatment if skin irritation persists.

Eye contact

Rinse eyes immediately with a flow of running water, open the eyelids (also using force if needed); remove contact lenses immediately if worn by the affected person. No neutralization should be performed in any case! Rinsing should be continued for 10-30 minutes from the inner to the outer eye corner to make sure that the other eye is not involved. Depending on the situation, call medical rescue service or ensure medical treatment as promptly as possible. Everyone must be referred for treatment even if affected only a little.

Ingestion

Rinse out the mouth with clean water. In the event of issues, find medical help.

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

Inhalation

Inhaling vapours can cause corrosion of the breathing system. Not expected.

Skin contact

Not expected.

Eye contact

Causes serious eye damage.

Ingestion

Corrosion of the digestion system can occur. Irritation, nausea.

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

Symptomatic treatment.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

alcohol-resistant foam, carbon dioxide, powder, water spray jet, water mist

Unsuitable extinguishing media

water - full jet

5.2. Special hazards arising from the substance or mixture

In the event of fire, carbon monoxide, carbon dioxide and other toxic gases may arise. Inhalation of hazardous degradation (pyrolysis) products may cause serious health damage.

5.3. Advice for firefighters

Use a self-contained breathing apparatus and full-body protective clothing. Closed containers with the product near the fire should be cooled with water. Do not allow run-off of contaminated fire extinguishing material to enter drains or surface and ground water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment for work. Follow the instructions in the Sections 7 and 8.

6.2. Environmental precautions

Prevent contamination of the soil and entering surface or ground water.

6.3. Methods and material for containment and cleaning up

Spilled product should be covered with suitable (non-flammable) absorbing material (sand, diatomaceous earth, earth and other suitable absorption materials); to be contained in well closed containers and removed as per the Section 13. In the event of leakage of the substantial amount of the product, inform fire brigade and other competent bodies. After removal of the product, wash the contaminated site with plenty of water. Do not use solvents.

6.4. Reference to other sections

See the Section 7, 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Prevent formation of gases and vapours in flammable or explosive concentrations and concentrations exceeding the occupational exposure limits. The product should be used only in areas where it is not in contact with open fire and other ignition sources. No smoking. Protect against direct sunlight. Electrostatic charge may be formed during use; use only earthed piping (tubing) when repumping. Use of antistatic clothes and footwear is recommended. Use non-sparking tools. Do not inhale gases and vapours. Prevent contact with skin and eyes. Use personal protective equipment as per Section 8. Observe valid legal regulations on safety and health protection.

7.2. Conditions for safe storage, including any incompatibilities

Store in tightly closed containers in cold, dry and well ventilated areas designated for this purpose. Do not expose to sunlight.

Storage class	8B - Non-combustible corrosive substances
Content	0,1 l and 1 l
Packaging type	dóza
Material of package	HDPE (2), High-density (linear) polyethylene (Plastics)

HDPE

Storage temperature	min 0 °C, max 40 °C

The specific requirements or rules relating to the substance/mixture

Solvent vapours are heavier than air and accumulate especially near the floor where they may form an explosive mixture with the air.

7.3. Specific end use(s)

Follow the instructions appearing on the information sheet, respectively, product labeling.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

The mixture contains substances for which occupational exposure limits are set.

European Union

Substance name (component)	Type	Time of exposure	Value	Note	Source
2-[2-(2-Butoxyethoxy)ethoxy] ethanol (CAS: 143-22-6)	TWA		50 mg/m³		
	TWA		9 ppm		
2-(2-butoxyethoxy)ethanol (CAS: 112-34-5)	OEL	8 hours	67,5 mg/m³		EU limits
	OEL	8 hours	10 ppm		
	OEL	Short-term	101,2 mg/m³		
	OEL	Short-term	15 ppm		

United Kingdom of Great Britain and Northern Ireland

Substance name (component)	Type	Time of exposure	Value	Note	Source
2,2' -oxybisethanol (CAS: 111-46-6)	WEL	8 hours	101 mg/m³		Gestis
	WEL	8 hours	23 ppm		
2-(2-butoxyethoxy)ethanol (CAS: 112-34-5)	WEL	8 hours	67,5 mg/m³		Gestis
	WEL	Short-term	101,2 mg/m³		
	WEL	8 hours	10 ppm		
	WEL	Short-term	15 ppm		

DNEL

2-(2-butoxyethoxy)ethanol

Workers / consumers	Route of exposure	Value	Effect	Determining method
Workers	Dermal	20 mg/kg bw/day	Systemic chronic effects	
Workers	Inhalation	67.5 mg/m³	Local chronic effects	
Workers	Dermal	20 mg/kg bw/day	Systemic chronic effects	
Consumers	Inhalation	50.6 mg/m³	Local acute effects	
Consumers	Oral	1.25 mg/kg bw/day	Systemic chronic effects	
Consumers	Inhalation	34 mg/m³	Systemic chronic effects	
Workers	Inhalation	101.2 mg/m³	Local acute effects	

2-(-2-Ethoxyethoxy)ethanol

Workers / consumers	Route of exposure	Value	Effect	Determining method
Workers	Dermal	50 mg/kg/24hour	Local chronic effects	
Workers	Inhalation	37 mg/m³	Local chronic effects	
Consumers	Dermal	25 mg/kg/24hour	Local chronic effects	
Consumers	Inhalation	18.3 mg/m³	Local chronic effects	
Consumers	Oral	25 mg/kg/24hour	Local chronic effects	

2,2' -oxybisethanol

Workers / consumers	Route of exposure	Value	Effect	Determining method
Workers	Dermal	106 mg/kg bw/day	Systemic chronic effects	
Workers	Inhalation	60 mg/m³	Systemic chronic effects	
Consumers	Dermal	53 mg/kg bw/day	Systemic chronic effects	
Consumers	Inhalation	12 mg/m³	Systemic chronic effects	

2-[2-(2-Butoxyethoxy)ethoxy]ethanol

Workers / consumers	Route of exposure	Value	Effect	Determining method
Workers	Dermal	50 mg/kg bw/day	Systemic chronic effects	
Workers	Inhalation	195 mg/m³	Systemic chronic effects	
Consumers	Oral	2.5 mg/kg bw/day	Systemic chronic effects	
Consumers	Inhalation	117 mg/m³	Systemic chronic effects	
Consumers	Dermal	25 mg/kg bw/day	Systemic chronic effects	

Triethylenglykol

Workers / consumers	Route of exposure	Value	Effect	Determining method
Workers	Dermal	40 mg/kg/24hour	Local chronic effects	
Workers	Inhalation	50 mg/m³	Local chronic effects	
Consumers	Dermal	20 mg/kg/24hour	Local chronic effects	
Consumers	Inhalation	25 mg/kg/24hour	Local chronic effects	

PNEC

2-(2-butoxyethoxy)ethanol

Route of exposure	Value	Determining method
Drinking water	1 mg/l	
Seawater	0.1 mg/l	
Freshwater sediment	4 mg/kg	
Sea sediments	0.4 mg/kg	
Microorganisms in wastewater treatment plants	200 mg/l	

2-(-2-Ethoxyethoxy)ethanol

Route of exposure	Value	Determining method
Freshwater environment	0.74 mg/l	
Seawater	0.074 mg/l	
Freshwater sediment	2.74 mg/kg	
Sea sediments	0.274 mg/kg	
Soil (agricultural)	0.15 mg/kg	

2,2' -oxybisethanol

Route of exposure	Value	Determining method
Drinking water	10 mg/l	
Seawater	1 mg/l	
Freshwater sediment	20.9 mg/kg	
Sea sediments	2.09 mg/kg	
Soil (agricultural)	1.53 mg/kg	
Microorganisms in wastewater treatment plants	199.5 mg/l	

2-[2-(2-Butoxyethoxy)ethoxy]ethanol

Route of exposure	Value	Determining method
Freshwater environment	1.5 mg/l	
Seawater	0.15 mg/l	
Freshwater sediment	5.77 mg/kg	
Sea sediments	0.13 mg/kg	
Soil (agricultural)	0.45 mg/kg	
Food chain	111 mg/kg	
Microorganisms in wastewater treatment plants	200 mg/l	

Triethylenglykol

Route of exposure	Value	Determining method
Freshwater environment	10 mg/l	
Seawater	1 mg/l	
Freshwater sediment	46 mg/kg	
Soil (agricultural)	3.32 mg/kg	

8.2. Exposure controls

Follow usual measures for health protection at work and especially for good ventilation. This can be achieved only by local suction or efficient general ventilation. If exposure limits cannot be observed in this mode, suitable protection of airways must be used. Do not eat, drink and smoke during work. Wash your hands thoroughly with water and soap after work and before breaks for a meal and rest.

Eye/face protection

Protective goggles or face shield (based on the nature of the work performed).

Skin protection

Hand protection: Protective gloves resistant to the product. When choosing appropriate thickness, material and permeability of the gloves, observe recommendations of their particular manufacturer. Observe other recommendations of the manufacturer. Other protection: protective workwear. Contaminated skin should be washed thoroughly.

Respiratory protection

Halfmask with a filter against organic vapours or a self-contained breathing apparatus as appropriate if exposure limit values of substances are exceeded or in a poorly ventilated environment.

Thermal hazard

not available

Environmental exposure controls

Observe usual measures for protection of the environment, see Section 6.2.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	fluid
Physical state	liquid at 20°C
color	colourless
Odour	data not available
Odour threshold	data not available
pH	7-11 (undiluted)
Melting point/freezing point	-50 °C
Initial boiling point and boiling range	>260 °C
Flash point	>130 °C
Evaporation rate	data not available
Flammability (solid, gas)	data not available
Upper/lower flammability or explosive limits	
flammability limits	data not available
explosive limits	data not available
Vapour pressure	<0.1 kPa at 20 °C
Vapour density	data not available
Relative density	data not available
Solubility(ies)	
solubility in water	unlimited
solubility in fats	data not available
Partition coefficient: n-octanol/water	0.44
Auto-ignition temperature	data not available
Decomposition temperature	data not available
Viscosity	data not available
Kinematic viscosity	5-10 mm^2/s at 40°C
Explosive properties	data not available
Oxidising properties	data not available
They are not available	

9.2. Other information

Density	1.02 g/cm^3 at 20 °C
ignition temperature	data not available

SECTION 10: Stability and reactivity

10.1. Reactivity

The mixture is non-flammable.

10.2. Chemical stability

The product is stable under normal conditions.

10.3. Possibility of hazardous reactions

The product is stable under normal conditions.

10.4. Conditions to avoid

The product is stable and no degradation occurs under normal use. Protect against flames, sparks, overheating and against frost.

10.5. Incompatible materials

Protect against strong acids, bases and oxidizing agents. Thereby a dangerous exothermic reaction will be prevented.

10.6. Hazardous decomposition products

Not developed under normal uses. Dangerous products are formed at high temperature and in fire, such as carbon monoxide and carbon dioxide, heavy smoke and nitrogen oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

No toxicological data is available for the mixture.

Acute toxicity

Based on available data the classification criteria are not met.

1,1'-Iminodipropan-2-ol

Route of exposure	Parameter	Value	Time of exposure	Species	Sex
Oral	LD_{50}	4765 mg/kg		Rat (Rattus norvegicus)	

2-(2-butoxyethoxy)ethanol

Route of exposure	Parameter	Value	Time of exposure	Species	Sex
Oral	LD_{50}	3384 mg/kg		Rat (Rattus norvegicus)	
Dermal	LD_{50}	2700 mg/kg		Rabbit	

2,2' -oxybisethanol

Route of exposure	Parameter	Value	Time of exposure	Species	Sex
Oral	LD_{50}	12565 mg/kg		Rat	
Dermal	LD_{50}	11890 mg/kg		Rat	
Inhalation (dust/mist)	LC_{50}	0.13 mg/l	4 hour	Rat (Rattus norvegicus)	
Oral	LD_{50}	19600 mg/kg bw			

2-[2-(2-Butoxyethoxy)ethoxy]ethanol

Route of exposure	Parameter	Value	Time of exposure	Species	Sex
Oral	LD_{50}	5170 mg/kg bw			
Dermal	LD_{50}	3540 mg/kg		Rabbit	
Dermal	LD_{50}	3540 mg/kg bw			
Inhalation (dust/mist)	LC_{50}	>2.4 mg/l	4 hour		
Oral	LD_{50}	5170 mg/kg		Rat (Rattus norvegicus)	

brake fluid FORCE DOT-4

Route of exposure	Parameter	Value	Time of exposure	Species	Sex
Oral	LD_{50}	>2000 mg/kg		Rat	
Dermal	LD_{50}	>2000 mg/kg		Rat	

Skin corrosion/irritation
Based on available data the classification criteria are not met.

Serious eye damage/irritation
Causes serious eye damage.

Respiratory or skin sensitisation
Based on available data the classification criteria are not met.

Germ cell mutagenicity
Based on available data the classification criteria are not met.

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

Reproductive toxicity
Based on available data the classification criteria are not met.

Toxicity for specific target organ - single exposure
Based on available data the classification criteria are not met.

Toxicity for specific target organ - repeated exposure
Based on available data the classification criteria are not met.

Aspiration hazard
Based on available data the classification criteria are not met.

More information
They are not available

SECTION 12: Ecological information

12.1. Toxicity

Acute toxicity
The product contains no substances with an effect against active action of microorganisms.

1,1'-Iminodipropan-2-ol

Parameter	Value	Time of exposure	Species	Environment
LC_{50}	>1000-2200 mg/l of air	96 hour	Fishes (Leuciscus idus)	

2,2' -oxybisethanol

Parameter	Value	Time of exposure	Species	Environment
LC_{50}	75200 mg/l		Fishes (Oncorhynchus mykiss)	
EC_{50}	>10000 mg/l	72 hour	Other aquatic organisms	

2-[2-(2-Butoxyethoxy)ethoxy]ethanol

Parameter	Value	Time of exposure	Species	Environment
LC_{50}	>2200 mg/l	96 hour	Fishes (Oncorhynchus mykiss)	
EC_{50}	>500 mg/l	48 hour	Daphnia (Daphnia magna)	
EC_{50}	>5000 mg/l	16 hour	Other aquatic organisms	
EC_{50}	2210 mg/l	72 hour	Other aquatic organisms	

2-[2-(2-Butoxyethoxy)ethoxy]ethanol

Parameter	Value	Time of exposure	Species	Environment
ErC_{50}	2490 mg/l	72 hour	Algae and other aquatic plants	
Log Pow	0.51			
Log Koc	10			

More information

They are not available

12.2. Persistence and degradability

Biodegradability

2-[2-(2-Butoxyethoxy)ethoxy]ethanol

Parameter	Method	Value	Time of exposure	Environment	Result
	OECD 301D	85 %	28 day		

The product is biodegradable.

12.3. Bioaccumulative potential

1,1'-Iminodipropan-2-ol

Parameter	Value	Time of exposure	Species	Environment	Surrounding temperature [°C]
Log Pow	-0.82 mg/kg				

Insignificant.

12.4. Mobility in soil

Not available. The product is soluble and mobile in water and soil.

12.5. Results of PBT and vPvB assessment

The product is not classified as PBT or vPvB.

12.6. Other adverse effects

Water hazard class: WGK 1

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Hazard of environmental contamination; dispose of the waste in accordance with the local and/or national regulations. Proceed in accordance with valid regulations on waste disposal. Any unused product and contaminated packaging should be put in labelled containers for waste collection and submitted for disposal to a person authorised for waste removal (a specialized company) that is entitled for such activity. Do not empty unused product in drainage systems. The product must not be disposed of with municipal waste. Empty containers may be used at waste incinerators to produce energy or deposited in a dump with appropriate classification. Perfectly cleaned containers can be submitted for recycling.

Waste management legislation

Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste, as amended. Decision 2000/532/EC establishing a list of wastes, as amended.

Waste type code

16 01 13 brake fluids

Packaging waste type code

15 01 10 packaging containing residues of or contaminated by dangerous substances

15 01 02 plastic packaging

SECTION 14: Transport information

14.1. UN number

Not subject to ADR.

14.2. UN proper shipping name

not available

14.3. Transport hazard class(es)

not available

14.4. Packing group

not available

14.5. Environmental hazards

not available

14.6. Special precautions for user

not available

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

not available

SECTION 15: Regulatory information

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

Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18th December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing the European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No. 793/93 and Commission Regulation (EC) No. 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, as amended. Regulation (EC) No. 1272/2008 of the European Parliament and of the Council of 16th December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No. 1907/2006, as amended.

15.2. Chemical safety assessment

not available

SECTION 16: Other information

A list of standard risk phrases used in the safety data sheet

H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Guidelines for safe handling used in the safety data sheet

P102	Keep out of reach of children.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a doctor.
P501	Dispose of contents/container to in accordance with local regulations.

Other important information about human health protection

The product must not be - unless specifically approved by the manufacturer/importer - used for purposes other than as per the Section 1. The user is responsible for adherence to all related health protection regulations.

Key to abbreviations and acronyms used in the safety data sheet

ADR	European agreement concerning the international carriage of dangerous goods by road
BCF	Bioconcentration Factor
CAS	Chemical Abstracts Service
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substance and mixtures
DNEL	Derived no-effect level
EC	Identification code for each substance listed in EINECS
EC_{50}	Concentration of a substance when it is affected 50% of the population
EINECS	European Inventory of Existing Commercial Chemical Substances

EmS	Emergency plan
EU	European Union
IATA	International Air Transport Association
IBC	International Code For The Construction And Equipment of Ships Carrying Dangerous Chemicals
IC_{50}	Concentration causing 50% blockade
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
INCI	International Nomenclature of Cosmetic Ingredients
ISO	International Organization for Standardization
IUPAC	International Union of Pure and Applied Chemistry
LC_{50}	Lethal concentration of a substance in which it can be expected death of 50% of the population
LD_{50}	Lethal dose of a substance in which it can be expected death of 50% of the population
LOAEC	Lowest observed adverse effect concentration
LOAEL	Lowest observed adverse effect level
log Kow	Octanol-water partition coefficient
MARPOL	International Convention for the Prevention of Pollution From Ships
NOAEC	No observed adverse effect concentration
NOAEL	No observed adverse effect level
NOEC	No observed effect concentration
NOEL	No observed effect level
OEL	Occupational Exposure Limits
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted no-effect concentration
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Agreement on the transport of dangerous goods by rail
UN	Four-figure identification number of the substance or article taken from the UN Model Regulations
UVCB	Substances of unknown or variable composition, complex reaction products or biological materials
VOC	Volatile organic compounds
vPvB	Very Persistent and very Bioaccumulative

Acute Tox.	Acute toxicity
Aquatic Acute	Hazardous to the aquatic environment
Aquatic Chronic	Hazardous to the aquatic environment
Eye Dam.	Serious eye damage
Eye Irrit.	Eye irritation
Skin Irrit.	Skin irritation
Skin Sens.	Skin sensitization
STOT RE	Specific target organ toxicity - repeated exposure

Training guidelines

Inform the personnel about the recommended ways of use, mandatory protective equipment, first aid and prohibited ways of handling the product.

Recommended restrictions of use

not available

Information about data sources used to compile the Safety Data Sheet

REGULATION (EC) No. 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL (REACH) as amended. REGULATION (EC) No. 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL as amended. First aid principles after the exposure to the chemicals (Zásady pro poskytování první pomoci při expozici chemickým látkám, doc. MUDr. Daniela Pelclová, CSc., MUDr. Alexandr Fuchs, CSc., MUDr. Miroslava Hornychová, CSc., MUDr. Zdeňka Trávníčková, CSc., Jiřina Fridrichovská, prom. chem.). Data from the manufacturer of the substance / mixture, if available - information from registration dossiers.

Statement

The safety data sheet provides information aimed at ensuring safety and health protection at work and environmental protection. The provided information corresponds to the current status of knowledge and experience and complies with valid legal regulations. The information should not be understood as guaranteeing the suitability and usability of the product for a particular application.