SAFETY DATA SHEET

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

PVB Varnish 16

Creation date	05. September 2013		
Revision date	02. March 2018	Version	2

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

1.1. Product identifier — PVB Varnish 16

Substance / mixture — mixture

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

mixture's intended use — Varnish for protecting PCBs

Disapproved uses of mixture — 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

Manufacturer

Name or trade name	AG TermoPasty Grzegorz Gąsowski
Address	Kolejowa 33 E, Sokoły, 18-218 Poland
Identification number (ID)	200133730
VAT Reg No	9661767714
Phone	862741342
E-mail	biuro@termopasty.pl
Web address	www.termopasty.pl

Competent person responsible for the safety data sheet

Name	AG TermoPasty Grzegorz Gąsowski
E-mail	biuro@termopasty.pl

1.4. Emergency telephone number

National Health Service (NHS) 111
National poisoning information centre Scotland, NHS 24: 111

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.

Aerosol 1, H222, H229
Eye Dam. 1, H318
STOT SE 3, H336

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

Most serious adverse physico-chemical effects

Extremely flammable aerosol. Pressurised container: May burst if heated.

Most serious adverse effects on human health and the environment

Causes serious eye damage. May cause drowsiness or dizziness.

2.2. Label elements

Hazard pictogram

Signal word

Danger

Hazardous substances

acetone
isopropanol
butan-1-ol

Hazard statements

H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.

H318	Causes serious eye damage.
H336	May cause drowsiness or dizziness.

Precautionary statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P251	Do not pierce or burn, even after use.
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 POISON CENTER.
P410+P412	Protect from sunlight. Do no expose to temperatures exceeding 50 °C/122 °F.

2.3. Other hazards

Mixture does not contain any substance meet the criteria for PBT or vPvB in accordance with Annex XIII of Regulation (EC) No. 1907/2006 (REACH) as amended.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Mixture of substances and additives specified below.

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: 601-003-00-5 CAS: 74-98-6 EC: 200-827-9	propane	<37,5	Flam. Gas 1, H220	2
Index: 601-004-00-0 CAS: 106-97-8 EC: 203-448-7	butane	<35,62	Flam. Gas 1, H220	1, 2, 4
Index: 606-001-00-8 CAS: 67-64-1 EC: 200-662-2 Registration number: 01-2119471330-49-XXXX	acetone	<20	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336	3
Index: 603-117-00-0 CAS: 67-63-0 EC: 200-661-7	isopropanol	<5	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336	
Index: 603-004-00-6 CAS: 71-36-3 EC: 200-751-6 Registration number: 01-2119484630-38-XXXX	butan-1-ol	<5	Flam. Liq. 3, H226 Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335, H336	

Notes

1 Note C: Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.

2 When put on the market gases have to be classified as "Gases under pressure", in one of the groups compressed gas, liquefied gas, refrigerated liquefied gas or dissolved gas. The group depends on the physical state in which the gas is packaged and therefore has to be assigned case by case. The following codes are assigned:

Press. Gas (Comp.)
Press. Gas (Liq.)
Press. Gas (Ref. Liq.)
Press. Gas (Diss.)

Aerosols shall not be classified as gases under pressure (See Annex I, Part 2, Section 2.3.2.1, Note 2).

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

4 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

If any health problems are manifested or if in doubt, inform a doctor and show him information from this safety data sheet.

Inhalation

Terminate the exposure immediately; move the affected person to fresh air. Protect the person against growing cold. Provide medical treatment if irritation, dyspnoea or other symptoms persist.

Skin contact

Remove contaminated clothes. Wash the affected area with plenty of water, lukewarm if possible.

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

Unlikely.

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

Inhalation

Inhaling vapours can cause corrosion of the breathing system. May cause drowsiness or dizziness.

Skin contact

Not expected.

Eye contact

Causes serious eye damage.

Ingestion

Corrosion of the digestion system can occur.

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. Self-Contained Breathing Apparatus (SCBA) with a chemical protection suit only where personal (close) contact is likely. 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

Provide sufficient ventilation. Extremely flammable aerosol. Pressurised container: May burst if heated. Remove all ignition sources. Use personal protective equipment for work. Follow the instructions in the Sections 7 and 8. Do not inhale gases and vapours. Prevent contact with skin and eyes.

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

Ventilate the room. 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.

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 the areas where it is not in contact with open fire and other ignition sources. Use non-sparking tools. Use of antistatic clothes and footwear is recommended. Do not inhale gases and vapours. Prevent contact with skin and eyes. No smoking. Protect against direct sunlight. Do not pierce or burn, even after use. Use only outdoors or in a well-ventilated area. 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. Store locked up. Protect from sunlight. Keep container tightly closed. Do not expose to temperatures exceeding 50 °C.

7.3. Specific end use(s)

not available

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
acetone (CAS: 67-64-1)	OEL	8 hours	1210 mg/m³		EU limits
	OEL	8 hours	500 ppm		

United Kingdom of Great Britain and Northern Ireland

Substance name (component)	Type	Time of exposure	Value	Note	Source
butane (CAS: 106-97-8)	WEL	8 hours	1450 mg/m³		GBR

United Kingdom of Great Britain and Northern Ireland

Substance name (component)	Type	Time of exposure	Value	Note	Source
butane (CAS: 106-97-8)	WEL	15 minutes	1810 mg/m³		GBR
	WEL	8 hours	600 ppm		
	WEL	15 minutes	750 ppm		
acetone (CAS: 67-64-1)	WEL	8 hours	1210 mg/m³		GBR
	WEL	15 minutes	3620 mg/m³		
	WEL	8 hours	500 ppm		
	WEL	15 minutes	1500 ppm		
isopropanol (CAS: 67-63-0)	WEL	8 hours	999 mg/m³		GBR
	WEL	15 minutes	1250 mg/m³		
	WEL	8 hours	400 ppm		
	WEL	15 minutes	500 ppm		
butan-1-ol (CAS: 71-36-3)	WEL	15 minutes	154 mg/m³	Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.	GBR
	WEL	15 minutes	50 ppm	Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.	

DNEL

acetone

Workers / consumers	Route of exposure	Value	Effect	Determining method
Workers	Inhalation	2420 mg/m³	Local acute effects	
Workers	Dermal	186 mg/kg bw/day	Systemic chronic effects	
Workers	Inhalation	1210 mg/m³	Systemic chronic effects	
Consumers	Dermal	62 mg/kg bw/day	Systemic chronic effects	
Consumers	Inhalation	200 mg/m³	Systemic chronic effects	
Consumers	Oral	62 mg/kg bw/day	Systemic chronic effects	

isopropanol

Workers / consumers	Route of exposure	Value	Effect	Determining method
Workers	Dermal	888 mg/kg	Systemic chronic effects	
Workers	Inhalation	500 mg/m³	Systemic chronic effects	
Consumers	Dermal	319 mg/kg	Systemic chronic effects	
Consumers	Inhalation	89 mg/m³	Systemic chronic effects	
Consumers	Oral	26 mg/kg	Systemic chronic effects	

PNEC

acetone

Route of exposure	Value	Determining method
Drinking water	10.6 mg/l	

acetone

Route of exposure	Value	Determining method
Seawater	1.06 mg/l	
Sea sediments	30.4 mg/kg of dry substance of sediment	
Freshwater sediment	30.4 mg/kg of dry substance of sediment	
Soil (agricultural)	29.5 mg/kg of dry substance of soil	
Microorganisms in wastewater treatment plants	100 mg/l	

isopropanol

Route of exposure	Value	Determining method
Drinking water	140.9 mg/l	
Seawater	140.9 mg/l	
Freshwater sediment	552 mg/kg	
Sea sediments	552 mg/kg	
Soil (agricultural)	28 mg/kg	

8.2. Exposure controls

Follow the usual measures intended 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	liquid
Physical state	gas at 20°C
color	colourless
Odour	data not available
Odour threshold	data not available
pH	data not available
Melting point/freezing point	data not available
Initial boiling point and boiling range	data not available
Flash point	data not available
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	data not available

Vapour density	data not available
Relative density	data not available
Solubility(ies)	
solubility in water	data not available
solubility in fats	data not available
Partition coefficient: n-octanol/water	data not available
Auto-ignition temperature	data not available
Decomposition temperature	data not available
Viscosity	44 mPa*s
Explosive properties	data not available
Oxidising properties	data not available

9.2. Other information

Density	0.792 g/cm^3
ignition temperature	380 °C

SECTION 10: Stability and reactivity

10.1. Reactivity

not available

10.2. Chemical stability

The product is stable under normal conditions.

10.3. Possibility of hazardous reactions

Unknown.

10.4. Conditions to avoid

The product is stable and no degradation occurs under normal use. Protect against flames, sparks, overheating and against frost. Pressurised container: May burst if heated.

10.5. Incompatible materials

Protect against strong acids, bases and oxidizing agents.

10.6. Hazardous decomposition products

Not developed under normal uses. Dangerous outcomes such as carbon monoxide and carbon dioxide are formed at high temperature and in fire.

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.

acetone

Route of exposure	Parameter	Value	Time of exposure	Species	Sex
Oral	LD_{50}	5800 mg/kg		Rat (Rattus norvegicus)	
Inhalation (vapor)	LC_{50}	76 mg/l	4 hour	Rat (Rattus norvegicus)	
Dermal	LD_{50}	7400 mg/kg		Rabbit	
Dermal	LD_{50}	7400 mg/kg		Guinea-pig (Cavia aperea f. porcellus)	

butan-1-ol

Route of exposure	Parameter	Value	Time of exposure	Species	Sex
Oral	LD_{50}	2292 mg/kg		Rat (Rattus norvegicus)	
Dermal	LD_{50}	3430 mg/kg		Rabbit	

butan-1-ol

Route of exposure	Parameter	Value	Time of exposure	Species	Sex
Inhalation	LC_{50}	17.76 mg/l	4 hour	Rat (Rattus norvegicus)	

isopropanol

Route of exposure	Parameter	Value	Time of exposure	Species	Sex
Oral	LD_{50}	5840 mg/kg		Rat (Rattus norvegicus)	
Dermal	LD_{50}	13900 mg/kg		Rabbit	
Inhalation	LC_{50}	25000 mg/m³		Rat (Rattus norvegicus)	

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

Serious eye damage/irritation
Causes serious eye damage.

acetone

Route of exposure	Result	Method	Time of exposure	Species
Eye		OECD 405		

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
May cause drowsiness or dizziness.

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

Aspiration hazard
Inhalation of solvent vapors above values exceeding exposure limits for working environment may result in acute inhalation poisoning, depending on the level of concentration and exposure time. Based on available data the classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity

Acute toxicity

Data for the mixture are not available.

acetone

Parameter	Value	Time of exposure	Species	Environment
LC_{50}	8800 mg/l	48 hour	Invertebrates	Freshwater
LC_{50}	2100 mg/l	24 hour	Invertebrates	Salt water
LOEC	530 mg/l	8 day	Algae and other aquatic plants	Freshwater
NOEC	430 mg/l	96 hour	Algae and other aquatic plants	Salt water
LC_{50}	5540 mg/l	96 hour	Fishes (Oncorhynchus mykiss)	Freshwater
LC_{50}	11000 mg/l	96 hour	Fishes	Salt water

butan-1-ol

Parameter	Value	Time of exposure	Species	Environment
LC_{50}	1376 mg/l	96 hour	Fishes (Pimephales promelas)	
EC_{50}	1328 mg/l	48 hour	Daphnia (Daphnia magna)	
EC_{50}	4390 mg/l	17 hour	Microorganisms (Pseudomonas putida)	
EC_{50}	225 mg/l	96 hour	Algae and other aquatic plants (Pseudokirchneriella subcapitata)	
NOEC	4.1 mg/l	21 day	Daphnia (Daphnia magna)	
EC_{50}	18 mg/l	21 day	Daphnia (Daphnia magna)	

isopropanol

Parameter	Value	Time of exposure	Species	Environment
EC_{50}	1800 mg/l	7 day	Algae	
LOEC	10000 mg/l	48 hour	Daphnia magna	

Chronic toxicity

acetone

Parameter	Value	Time of exposure	Species	Environment
NOEC	2212 mg/l	24 hour	Invertebrates (Daphnia magna)	

12.2. Persistence and degradability

Not available.

12.3. Bioaccumulative potential

Not available.

12.4. Mobility in soil

Not available.

12.5. Results of PBT and vPvB assessment

Product does not contain any substance meeting the criteria for PBT or vPvB in accordance with the Annex XIII of Regulation (EC) No 1907/2006 (REACH) as amended.

12.6. Other adverse effects

Not available.

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.

Legislation of waste

Council Directive 75/442/EEC on waste, as amended. Decree No. 383/2001 Coll., on details regarding waste handling as amended. Decree No. 93/2016 Coll., (waste catalogue) as amended. Decision 2000/532/EC establishing a list of wastes, as amended.

SECTION 14: Transport information

14.1. UN number

UN 1950

14.2. UN proper shipping name

AEROSOLS

14.3. Transport hazard class(es)

2 Gases

14.4. Packing group

not available

14.5. Environmental hazards

not available

14.6. Special precautions for user

Reference in the Sections 4 to 8.

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

not available

Additional information

Hazard identification No.	(Kemler Code)
UN number	1950
Classification code	5F
Safety signs	2.1

Air transport - ICAO/IATA

Packaging instructions passenger	203
Cargo packaging instructions	203

Marine transport - IMDG

EmS (emergency plan)	F-D, S-U
MFAG	620

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. The Act No. 350/2011 Coll., on Chemical Substances and Chemical Preparations as amended (the Chemical Act). Decree No. 80/2014 Coll., amending the Decree No. 194/2001 Coll., laying down technical requirements for aerosol sprays as amended. Decree No. 432/2003 Coll., laying down conditions for assigning categories to individual jobs, limit values of indices from biological exposure tests, conditions for the sampling of biological materials for biological exposure and the particulars of the reports on work with asbestos and biological agents as amended.

Restrictions pursuant to Annex XVII of Regulation (EC) No. 1907/2006 (REACH), as amended

butane

Restriction	Conditions of restriction
28	Without prejudice to the other parts of this Annex the following shall apply to entries 28 to 30: 1. Shall not be placed on the market, or used, — as substances, — as constituents of other substances, or, — in mixtures, for supply to the general public when the individual concentration in the substance or mixture is equal to or greater than: — either the relevant specific concentration limit specified in Part 3 of Annex VI to Regulation (EC) No 1272/2008, or, — the relevant concentration specified in Directive 1999/45/EC where no specific concentration limit is set out in Part 3 of Annex VI to Regulation (EC) No 1272/2008. Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of substances and mixtures, suppliers shall ensure before the placing on the market that the packaging of such substances and mixtures is marked visibly, legibly and indelibly as follows: "Restricted to professional users". 2. By way of derogation, paragraph 1 shall not apply to: (a) medicinal or veterinary products as defined by Directive 2001/82/EC and Directive 2001/83/EC; (b) cosmetic products as defined by Directive 76/768/EEC; (c) the following fuels and oil products: — motor fuels which are covered by Directive 98/70/EC, — mineral oil products intended for use as fuel in mobile or fixed combustion plants, — fuels sold in closed systems (e.g. liquid gas bottles); (d) artists' paints covered by Directive 1999/45/EC. (e) the substances listed in Appendix 11, column 1, for the applications or uses listed in Appendix 11, column 2. Where a date is specified in column 2 of Appendix 11, the derogation shall apply until the said date.

butane

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15.2. Chemical safety assessment

not available

SECTION 16: Other information

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

H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H229	Pressurised container: May burst if heated.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.

Guidelines for safe handling used in the safety data sheet

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P251	Do not pierce or burn, even after use.
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 POISON CENTER.
P410+P412	Protect from sunlight. Do no expose to temperatures exceeding 50 °C/122 °F.

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

EUH 066	Repeated exposure may cause skin dryness or cracking.

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
Aerosol	Flammable aerosol
Eye Dam.	Serious eye damage
Eye Irrit.	Eye irritation
Flam. Gas	Flammable gas
Flam. Liq.	Flammable liquid
Skin Irrit.	Skin irritation
STOT SE	Specific target organ toxicity - single 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. The Act No. 350/2011 Coll., on Chemical Substances and Chemical Preparations 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.