

SAFETY DATA SHEET

**ŠKODA**

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

Anti-freeze

Creation date 22. February 2019
Revision date Version 1.0

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

- 1.1. Product identifier**
Substance / mixture Anti-freeze
Number HBO096013
- 1.2. Relevant identified uses of the substance or mixture and uses advised against**
Mixture's intended use Concentrated product designed to prevent ice formation on glasses and reflectors of motor vehicles.
Mixture uses advised against The product should not be used in ways other than those referred in Section 1.
- 1.3. Details of the supplier of the safety data sheet**
Supplier
Name or trade name ŠKODA AUTO a.s.
Address tř. Václava Klementa 869, Mladá Boleslav II, 293 01
Czech Republic
VAT Reg No CZ00177041
Phone +420 326 811 111
E-mail msds@skoda-auto.cz
Web address www.skoda-auto.cz
- Competent person responsible for the safety data sheet**
Name Ing. Tadeáš Narovec
E-mail tadeas.narovec@skoda-auto.cz
- 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.

Flam. Liq. 3, H226

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

Most serious adverse physico-chemical effects

Flammable liquid and vapour.

- 2.2. Label elements**
Hazard pictogram

**Signal word**

Warning

Hazard statements

H226 Flammable liquid and vapour.

Precautionary statements

- P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P370+P378 In case of fire: Use powder extinguisher/sand/carbon dioxide to extinguish.

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P501 Dispose of contents/container to by handing over to the person authorized to dispose of waste or by returning to the supplier.

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: 603-002-00-5 CAS: 64-17-5 EC: 200-578-6 Registration number: 01-2119457610-43	ethanol	>30-35	Flam. Liq. 2, H225 Eye Irrit. 2, H319 Specific concentration limit: Eye Irrit. 2, H319: C ≥ 50 %	1
Index: 603-027-00-1 CAS: 107-21-1 EC: 203-473-3 Registration number: 01-2119456816-28	ethanediol	<1,5	Acute Tox. 4, H302 STOT RE 2, H373	1
CAS: 68891-38-3 EC: 500-234-8 Registration number: 01-2119488639-16-xxxx	Alcohols, C12-14(even numbered), ethoxylated < 2.5 EO, sulfates, sodium salts	<0,5	Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 3, H412 Specific concentration limit: Eye Irrit. 2, H319: 5 % < C ≤ 10 % Eye Dam. 1, H318: C ≥ 10 %	

Notes

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

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. 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. Soap, soap solution or shampoo should be used if there is no skin injury. Provide medical treatment if skin irritation persists. Rinse skin with water/shower.

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. Rinsing should continue at least for 10 minutes.

Ingestion

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

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

Inhalation

Mucous membranes may be irritated.

Skin contact

Irritation, itching, redness.

Eye contact

Irritation of eye tissue layers.

Ingestion

Nausea, stomach pain, vomiting, diarrhoea.

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

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

Provide sufficient ventilation. Flammable liquid and vapour. Remove all ignition sources. 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.

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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. No smoking. Use only non-sparking tools. Use personal protective equipment as per Section 8. Observe valid legal regulations on safety and health protection. Ground and bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Take precautionary measures against static discharge.

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. Keep container tightly closed. Keep cool.

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)

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
ethanediol (CAS: 107-21-1)	OEL	8 hours	52 mg/m ³		EU limits
	OEL	8 hours	20 ppm		
	OEL	Short-term	104 mg/m ³		
	OEL	Short-term	40 ppm		
	OEL	8 hours	52 mg/m ³	skin	
	OEL	8 hours	20 ppm	skin	
	OEL	Short-term	104 mg/m ³	skin	
	OEL	Short-term	40 ppm	skin	

United Kingdom of Great Britain and Northern Ireland

Substance name (component)	Type	Time of exposure	Value	Note	Source
ethanol (CAS: 64-17-5)	WEL	8 hours	1920 mg/m ³		Gestis
	WEL	8 hours	1000 ppm		
ethanediol (CAS: 107-21-1)	WEL	8 hours	10 mg/m ³		GBR
	WEL	8 hours	10 mg/m ³	Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity., Particulates only	
	WEL	8 hours	20 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., Vapour	

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United Kingdom of Great Britain and Northern Ireland

Substance name (component)	Type	Time of exposure	Value	Note	Source
ethanediol (CAS: 107-21-1)	WEL	8 hours	52 mg/m ³	Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity., Vapour	GBR
	WEL	15 minutes	104 mg/m ³	Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity., Vapour	
	WEL	15 minutes	40 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., Vapour	

8.2. Exposure controls

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

It is not needed.

Skin protection

Hand protection: Protective gloves resistant to the product. 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	liquid at 20°C
color	colourless
Odour	containing alcohol
Odour threshold	data not available
pH	data not available
Melting point/freezing point	>-30 °C
Initial boiling point and boiling range	data not available
Flash point	26 °C
Evaporation rate	data not available
Flammability (solid, gas)	Flammable liquid and vapour.
Upper/lower flammability or explosive limits	
flammability limits	data not available
explosive limits	
bottom	3.3 %
upper	19 %

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Vapour pressure	59 mbar at 20 °C
Vapour density	data not available
Relative density	data not available
Solubility(ies)	
solubility in water	soluble
solubility in fats	data not available
Partition coefficient: n-octanol/water	data not available
Auto-ignition temperature	>350 °C
Decomposition temperature	data not available
Viscosity	data not available
Kinematic viscosity	1.14 mm ² /s at 40°C
Explosive properties	data not available
Oxidising properties	data not available

9.2. Other information

Density	1.055-1.065 g/cm ³
ignition temperature	data not available
combustion temperature	33 °C
content of organic solvents (VOC)	0.29 kg/kg
total organic carbon (TOC)	0.15 kg/kg
solid content (dry matter)	<1 % volume

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.

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.

Alcohols, C12-14(even numbered), ethoxylated < 2.5 EO, sulfates, sodium salts

Route of exposure	Parameter	Method	Value	Time of exposure	Species	Sex
Oral	LD ₅₀	OECD 401	4100 mg/kg		Rat	
Dermal	LD ₅₀	OECD 402	>2000 mg/kg		Rat	

ethanediol

Route of exposure	Parameter	Method	Value	Time of exposure	Species	Sex
Oral			500 mg/kg			
Inhalation	LC ₅₀		>2.5 mg/l	6 hour	Rat (Rattus norvegicus)	

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ethanediol

Route of exposure	Parameter	Method	Value	Time of exposure	Species	Sex
Dermal	LD ₅₀	OECD 402	>3500 mg/kg		Mouse	

ethanol

Route of exposure	Parameter	Method	Value	Time of exposure	Species	Sex
Inhalation (vapor)	LC ₅₀		124.7 mg/l	4 hour	Rat	
Oral	LD Lo		7000 mg/kg bw		Rat	
Inhalation (vapor)	LC ₅₀		116.9 mg/l	4 hour	Rat	
Inhalation (vapor)	LC ₅₀		133.8 mg/l	4 hour	Rat	

Skin corrosion/irritation

Based on available data the classification criteria are not met.

Alcohols, C12-14(even numbered), ethoxylated < 2.5 EO, sulfates, sodium salts

Route of exposure	Result	Method	Time of exposure	Species
Dermal	Irritating	OECD 404		Rabbit

ethanediol

Route of exposure	Result	Method	Time of exposure	Species
Dermal	Not irritating			Rabbit

Serious eye damage/irritation

Based on available data the classification criteria are not met.

Alcohols, C12-14(even numbered), ethoxylated < 2.5 EO, sulfates, sodium salts

Route of exposure	Result	Time of exposure	Species
Eye	Serious eye damage		Rabbit

ethanediol

Route of exposure	Result	Time of exposure	Species
Eye	Not irritating		Rabbit

ethanol

Route of exposure	Result	Time of exposure	Species
	Irritating		Rabbit

Respiratory or skin sensitisation

Based on available data the classification criteria are not met.

Alcohols, C12-14(even numbered), ethoxylated < 2.5 EO, sulfates, sodium salts

Route of exposure	Result	Method	Time of exposure	Species	Sex
Dermal	Negative	OECD 406		Guinea-pig (<i>Cavia aperea f. porcellus</i>)	

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ethanediol

Route of exposure	Result	Method	Time of exposure	Species	Sex
Dermal	Negative			Guinea-pig (<i>Cavia aperea f. porcellus</i>)	

Germ cell mutagenicity

Based on available data the classification criteria are not met.

Alcohols, C12-14(even numbered), ethoxylated < 2.5 EO, sulfates, sodium salts

Result	Method	Time of exposure	Specific target organ	Species	Sex
Negative	in vitro				
Negative	OECD 475			Mouse	

ethanediol

Result	Method	Time of exposure	Specific target organ	Species	Sex
Negative	OECD 471				

Carcinogenicity

Based on available data the classification criteria are not met.

ethanediol

Route of exposure	Parameter	Value	Time of exposure	Result	Species	Sex
Oral			2 year	Negative	Mouse	

ethanol

Route of exposure	Parameter	Value	Time of exposure	Result	Species	Sex
Oral				Indeterminate	Rat	

Reproductive toxicity

Based on available data the classification criteria are not met.

Alcohols, C12-14(even numbered), ethoxylated < 2.5 EO, sulfates, sodium salts

	Parameter	Value	Result	Species	Sex
Effects on fertility			Negative	Rat	
Developmental toxicity			Negative	Rat	

ethanol

	Parameter	Value	Result	Species	Sex
Effects on fertility	NOAEL	>16000 ppm	No effect	Rat	
	NOAEL	5200 mg/kg/24hour	Indeterminate	Rat	

Toxicity for specific target organ - single exposure

Based on available data the classification criteria are not met.

ethanol

Route of exposure	Parameter	Value	Time of exposure	Specific target organ	Result	Species	Sex
Inhalation	LOAEL	2.6 mg/l	30 min	Nervous system	Drowsiness, Dizziness	Human	

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ethanol

Route of exposure	Parameter	Value	Time of exposure	Specific target organ	Result	Species	Sex
Inhalation	LOAEL	9.4 mg/l		Lungs	Indeterminate	Human	

Toxicity for specific target organ - repeated exposure

Based on available data the classification criteria are not met.

ethanediol

Route of exposure	Parameter	Value	Specific target organ	Result	Species	Sex
Oral		>10-100 mg/kg	Kidney			

Repeated dose toxicity

Alcohols, C12-14(even numbered), ethoxylated < 2.5 EO, sulfates, sodium salts

Route of exposure	Parameter	Result	Method	Value	Time of exposure	Species	Sex
Oral	NOAEL		OECD 408	≥225 mg/kg	90 day	Rat	

ethanediol

Route of exposure	Parameter	Result	Method	Value	Time of exposure	Species	Sex
Oral	NOAEL			150 mg/kg	2 year	Rat (Rattus norvegicus)	
Dermal	NOAEL		OECD 410	2200-4400 mg/kg	4 week	Dog	

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.

Alcohols, C12-14(even numbered), ethoxylated < 2.5 EO, sulfates, sodium salts

Parameter	Method	Value	Time of exposure	Species	Environment	Determining method
LC ₅₀	OECD 203	7.1 mg/l	96 hour	Fishes (Danio rerio)		
EC ₅₀	OECD 202	7.4 mg/l	48 hour	Daphnia (Daphnia magna)		
EC ₅₀	OECD 201	27.7 mg/l	72 hour	Algae (Desmodesmus subspicatus)		
NOEC	OECD 201	0.95 mg/l	72 hour	Algae (Desmodesmus subspicatus)		

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ethanediol

Parameter	Method	Value	Time of exposure	Environment	Result
	OECD 301A	90-100 %	10 day		Easily biodegradable

Data not available.

12.3. Bioaccumulative potential

Alcohols, C12-14(even numbered), ethoxylated < 2.5 EO, sulfates, sodium salts

Parameter	Value	Time of exposure	Species	Environment	Surrounding temperature [°C]
Log Pow	0.3				

ethanediol

Parameter	Value	Time of exposure	Species	Environment	Surrounding temperature [°C]
BCF	10		Fishes (Leuciscus idus)		
Log Pow	-1.93				

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.

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 15 antifreeze fluids other than those mentioned in 16 01 14
15 02 02 absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances

Packaging waste type code

15 01 02 plastic packaging

SECTION 14: Transport information

14.1. UN number

UN 1170

14.2. UN proper shipping name

ETHANOL SOLUTION

14.3. Transport hazard class(es)

3 Flammable liquids

14.4. Packing group

III - substances presenting low danger

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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

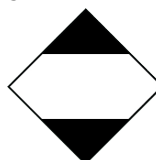
Additional information

Hazard identification No. **30** (Kemler Code)
UN number **1170**
Classification code F1
Safety signs 3



Road transport - ADR

Special provision 144, 601
Limited quantities 5 L
Sign



Excepted quantities E1
Packaging
Packing instructions P001, IBC03, LP01, R001
Mixed packing provisions MP19
Portable tanks and bulk containers
Guidelines T2
Special provision TP1
ADR tank
Tank code LGBF
Vehicles for tank carriage FL
Transport category 3
Tunnel restriction code (D/E)
Special provision for
packages V12
operation S2

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Railway transport - RID

Special provision	144, 601
Limited quantities	5I
Excepted quantities	E1

Packaging

Packing instructions	P001, IBC03, LP01, R001
Mixed packing provisions	MP19

Portable tanks and bulk containers

Guidelines	T2
Special provision	TP1

RID Tanks

Tank code	LGBF
Transport category	3

Special provision for

packages	W 12
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Air transport - ICAO/IATA

Packaging instructions for limited amount	Y344
Packaging instructions passenger	355
Cargo packaging instructions	366

Marine transport - IMDG

EmS (emergency plan)	F-E, S-D
MFAG	305
Marine Pollutant	No

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**

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H373	May cause damage to organs through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.

Guidelines for safe handling used in the safety data sheet

P102	Keep out of reach of children.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P370+P378	In case of fire: Use powder extinguisher/sand/carbon dioxide to extinguish.
P501	Dispose of contents/container to by handing over to the person authorized to dispose of waste or by returning to the supplier.
P101	If medical advice is needed, have product container or label at hand.

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P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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 K _{ow}	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 Chronic	Hazardous to the aquatic environment
Eye Dam.	Serious eye damage
Eye Irrit.	Eye irritation
Flam. Liq.	Flammable liquid
Skin Irrit.	Skin irritation
STOT RE	Specific target organ toxicity - repeated exposure

SAFETY DATA SHEET



ŠKODA

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

Anti-freeze

Creation date	22. February 2019	Version	1.0
Revision date			

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 Hornyčová, CSc., MUDr. Zdeňka Trávníčková, CSc., Jiřina Fridrichovská, prom. chem.). Data from the manufacturer of the substance / mixture, if available - information from registration dossiers.

More information

Classification procedure - calculation method.

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.