

DE-ICER BLUE

Creation date	10th August 2023	Version	4.0
Revision date			

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

- 1.1. Product identifier** DE-ICER BLUE
Substance / mixture mixture
Number R 34670
UFI 8KUQ-CY6D-A90Y-YMRY
- 1.2. Relevant identified uses of the substance or mixture and uses advised against**
Mixture's intended use
Glass and lock de-icer.
Mixture uses advised against
For professional use only.
- 1.3. Details of the supplier of the safety data sheet**
Supplier
Name or trade name RETECH, s.r.o.
Address Vackova 1541/4, Praha 5 - Stodůlky, 155 00
Czech Republic
Identification number (CRN) 25018205
VAT Reg No CZ25018205
Phone +420327596428
E-mail info@retech.cz
Web address www.retech.com
- Competent person responsible for the safety data sheet**
Name RETECH, s.r.o.
E-mail info@retech.cz
- 1.4. Emergency telephone number**
European emergency number: 112

SECTION 2: Hazards identification

- 2.1. Classification of the substance or mixture**
Classification of the mixture in accordance with Regulation (EC) No 1272/2008

The mixture is classified as dangerous.

Flam. Liq. 2, H225

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

Most serious adverse physico-chemical effects

Highly flammable liquid and vapour.

- 2.2. Label elements**
Hazard pictogram

**Signal word**

Danger

Hazard statements

H225 Highly flammable liquid and vapour.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P233 Keep container tightly closed.

P240 Ground and bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting equipment.

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P370+P378

In case of fire: Use powder extinguisher/sand/carbon dioxide to extinguish.

P501

Dispose of contents/container to according to applicable regulations.

2.3. Other hazards

The mixture does not contain substances with endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605. 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	25-<40	Flam. Liq. 2, H225 Eye Irrit. 2, H319 Specific concentration limit: Eye Irrit. 2, H319: C ≥ 50 %	
Index: 606-002-00-3 CAS: 78-93-3 EC: 201-159-0	butanone	<2	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066 Specific concentration limit: Eye Irrit. 2, H319: C ≥ 10 % STOT SE 3, H336: C > 20 %	1
Index: 603-117-00-0 CAS: 67-63-0 EC: 200-661-7	isopropanol	<2	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 Specific concentration limit: Eye Irrit. 2, H319: C ≥ 10 % STOT SE 3, H336: C > 20 %	

Notes

1 A substance for which exposure limits are set.

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.

If inhaled

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.

If on skin

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 or shower.

If in eyes

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.

If swallowed

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**If inhaled**

Not expected.

If on skin

Not expected.

If in eyes

Not expected.

If swallowed

Not expected.

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

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. Highly 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.

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. No smoking. 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 action to prevent static discharges.

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.

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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
Commission Directive 2000/39/EC

Substance name (component)	Type	Value
butanone (CAS: 78-93-3)	OEL 8 hours	600 mg/m ³
	OEL 8 hours	200 ppm
	OEL 15 minutes	900 mg/m ³
	OEL 15 minutes	300 ppm

DNEL

ethanol					
Workers / consumers	Route of exposure	Value	Effect	Value determination	Source
Workers	Inhalation	380 mg/m ³	Chronic effects systemic		
Workers	Dermal	8238 mg/kg bw/day	Chronic effects systemic		
Consumers	Inhalation	114 mg/m ³	Chronic effects systemic		

PNEC

ethanol			
Route of exposure	Value	Value determination	Source
Freshwater environment	0.96 mg/l		
Marine water	0.79 mg/l		
Microorganisms in sewage treatment	580 mg/l		
Freshwater sediment	3.6 mg/kg of dry substance of sediment		
Sea sediments	2.9 mg/kg of dry substance of sediment		
Soil (agricultural)	0.63 mg/kg of dry substance of soil		
Food chain	380 mg/kg of food		

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8.2. Exposure controls

Follow the usual measures intended for health protection at work and especially for good 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

It is not needed.

Skin protection

Hand protection: Protective gloves resistant to the product. Material of gloves: Nitrile rubber, NBR. Butyl rubber. Penetration time of glove material: > 480 min. 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. Take off contaminated clothing and wash before reuse. Contaminated skin should be washed thoroughly.

Respiratory protection

Under regular circumstances it is not necessary. 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. Filter A.

Thermal hazard

Not available.

Environmental exposure controls

Observe usual measures for protection of the environment, see Section 6.2. Keep container tightly closed.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state	liquid
Colour	blue
Odour	containing alcohol
Melting point/freezing point	-35 °C
Boiling point or initial boiling point and boiling range	78-80 °C
Flammability	Highly flammable liquid and vapour.
Lower and upper explosion limit	
bottom	3.8 %
upper	19 %
Flash point	22.5 °C
Auto-ignition temperature	>450 °C
Decomposition temperature	data not available
pH	7-9 (undiluted)
Kinematic viscosity	data not available
Solubility in water	soluble
Solubility in fats	data not available
Partition coefficient n-octanol/water (log value)	data not available
Vapour pressure	5.8 kPa at 20 °C
Density and/or relative density	
Density	0.9 g/cm ³ at 20 °C
Relative vapour density	data not available
Particle characteristics	data not available
Form	liquid

9.2. Other information

Evaporation rate	data not available
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SECTION 10: Stability and reactivity**10.1. Reactivity**

The mixture is flammable.

10.2. Chemical stability

The product is stable under normal conditions.

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10.3. Possibility of hazardous reactions

Protect against strong acids and oxidizing agents. Solvent vapours are heavier than air and accumulate especially near the floor where they may form an explosive mixture with the air.

10.4. Conditions to avoid

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

10.5. Incompatible materials

Protect against strong acids, bases and oxidizing agents. Peroxides. Alkali metals. Ammonia.

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 hazard classes as defined in Regulation (EC) No 1272/2008**

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. No toxicological data is available for the mixture.

Acute toxicity

Data for the mixture are not available. Based on the available data, the criteria for classification of the mixture are not met.

butanone					
Route of exposure	Parameter	Value	Exposure time	Species	Sex
Oral	LD ₅₀	3300 mg/kg		Rat	
Dermal	LD ₅₀	6400-8000 mg/kg		Rabbit	

ethanol					
Route of exposure	Parameter	Value	Exposure time	Species	Sex
Oral	LD ₅₀	6200 mg/kg		Rat	
Dermal	LD ₅₀	20000 mg/kg		Rabbit	
Inhalation	LC ₅₀	5.9 mg/l	6 hours	Rat	

isopropanol					
Route of exposure	Parameter	Value	Exposure time	Species	Sex
Oral	LD ₅₀	5480 mg/kg		Rat	
Dermal	LD ₅₀	12800 mg/kg		Rabbit	
Inhalation	LD ₅₀	72.6 mg/l	4 hours	Rat	

Skin corrosion/irritation

No data are available for either the mixture or the components. Based on the available data, the criteria for classification of the mixture are not met.

Serious eye damage/irritation

No data are available for either the mixture or the components. Based on the available data, the criteria for classification of the mixture are not met.

Respiratory or skin sensitisation

No data are available for either the mixture or the components. Based on the available data, the criteria for classification of the mixture are not met.

Germ cell mutagenicity

No data are available for either the mixture or the components. Based on the available data, the criteria for classification of the mixture are not met.

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Carcinogenicity

No data are available for either the mixture or the components. Based on the available data, the criteria for classification of the mixture are not met.

Reproductive toxicity

No data are available for either the mixture or the components. Based on the available data, the criteria for classification of the mixture are not met.

Toxicity for specific target organ - single exposure

No data are available for either the mixture or the components. Based on the available data, the criteria for classification of the mixture are not met.

Toxicity for specific target organ - repeated exposure

No data are available for either the mixture or the components. Based on the available data, the criteria for classification of the mixture are not met.

Aspiration hazard

No data are available for either the mixture or the components. Based on the available data, the criteria for classification of the mixture are not met.

More information

Ethanol - If inhaled: Headaches. Malaise. When intruding eyes, it can evoke irritation. Burning, redness, lacrimation. Repeated exposure may cause skin dryness. After swallowing: Nausea, stomach pain.

11.2. Information on other hazards

The mixture does not contain substances with endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

SECTION 12: Ecological information

12.1. Toxicity

Data for the mixture are not available. Based on the available data, the criteria for classification of the mixture are not met.

Acute toxicity

butanone				
Parameter	Value	Exposure time	Species	Environment
LC ₅₀	2993 mg/l	96 hours	Fish (Pimephales promelas)	
EC ₅₀	308 mg/l	48 hours	Daphnia (Daphnia magna)	
EC ₅₀	4300 mg/l	7 days	Algae (Scenedesmus quadricauda)	
ethanol				
Parameter	Value	Exposure time	Species	Environment
LC ₅₀	11200 mg/l	24 hours	Fish (Oncorhynchus mykiss)	
LC ₅₀	8140 mg/l	48 hours	Fish (Leuciscus idus)	
LC ₅₀	15.3 g/l	96 hours	Fish (Pimephales promelas)	
EC ₅₀	10800 mg/l	24 hours	Daphnia (Daphnia magna)	

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isopropanol				
Parameter	Value	Exposure time	Species	Environment
LC ₅₀	8970-9280 mg/l	48 hours	Fish (Leuciscus idus)	
LC ₅₀	9640 mg/l	96 hours	Fish (Pimephales promelas)	
EC ₅₀	>10000 mg/l	24 hours	Invertebrates (Artemia salina)	
EC ₅₀	>1000 mg/l	24 hours	Invertebrates (Daphnia magna)	

12.2. Persistence and degradability

No data are available for either the mixture or the components.

12.3. Bioaccumulative potential

No data are available for either the mixture or the components.

12.4. Mobility in soil

No data are available for either the mixture or the components.

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. Endocrine disrupting properties

The mixture does not contain substances with endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

12.7. 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 14 antifreeze fluids containing hazardous substances *

Packaging waste type code

15 01 10 packaging containing residues of or contaminated by hazardous substances *

15 01 02 plastic packaging

(*) - Hazardous waste according to Directive 2008/98/EC on hazardous waste

SECTION 14: Transport information**14.1. UN number or ID number**

UN 1170

14.2. UN proper shipping name

ETHANOL SOLUTION

14.3. Transport hazard class(es)

3 Flammable liquids

14.4. Packing group

II - substances presenting medium danger

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14.5. Environmental hazards

No

14.6. Special precautions for user

Reference in the Sections 4 to 8.

14.7. Maritime transport in bulk according to IMO instruments

not relevant

Additional information

Hazard identification No.

33

UN number

1170

Classification code

F1

Safety signs

3

**Road transport - ADR**

Limited quantities

1 L

Excepted quantities

E2

Transport category

2

Tunnel restriction code

(D/E)

Railway transport - RID

Excepted quantities

E2

Marine transport - IMDG

EmS (emergency plan)

F-E, S-D

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 as amended. Commission Regulation (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

15.2. Chemical safety assessment

A chemical safety assessment has not been carried out (mixture).

SECTION 16: Other information**A list of standard risk phrases used in the safety data sheet**

H225 Highly flammable liquid and vapour.

H319 Causes serious eye 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.

P233 Keep container tightly closed.

P240 Ground and bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting equipment.

P370+P378 In case of fire: Use powder extinguisher/sand/carbon dioxide to extinguish.

P501 Dispose of contents/container to according to applicable regulations.

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

EUH066 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
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
EuPCS	European Product Categorisation System
IATA	International Air Transport Association
IBC	International Code For The Construction And Equipment of Ships Carrying Dangerous Chemicals
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
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
log K _{ow}	Octanol-water partition coefficient
OEL	Occupational Exposure Limits
PBT	Persistent, Bioaccumulative and Toxic
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

Eye Irrit.	Eye irritation
Flam. Liq.	Flammable liquid
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. Data from the manufacturer of the substance / mixture, if available - information from registration dossiers.

The changes (which information has been added, deleted or modified)

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The version 4.0 replaces the SDS version from 06 January 2023. Changes were made in sections 1, 2, 12, 13, 15 and 16.

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.