

The safety data sheet complies with Commission Regulation (EU) 878/2020 of 18 June 2020 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH).

KLIMASOL L

Creation date 22nd October 2003 Revision date 22nd December 2023

ate 22nd December 2022 Version 15

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

1.1. Product identifier KLIMASOL L
Substance / mixture mixture

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

Mixture's intended use

Air conditioner cleaner

The use descriptors

IS Use at industrial sites

PW Widespread use by professional workers

Mixture uses advised against

Not specified. It is recommended to be used only for specified uses. Other uses may expose users to unforeseeable

1.3. Details of the supplier of the safety data sheet

Supplier

Name or trade name NOVATO

Address Uralská 770/6, Praha, 160 00

Czech Republic

Identification number (CRN)62910370VAT Reg NoCZ62910370Phone+420 233 339 688E-mailpetr.johanides@novato.cz

Web address www.novato.cz

Competent person responsible for the safety data sheet

Name ABITEC

E-mail info@abitec.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.

Eye Irrit. 2, H319

Most serious adverse physico-chemical effects

Thermal decomposition at high temperatures or incomplete combustion may cause release hazardous decomposition products. Avoid inhalation of decomposition products. Highly relaxing toxic gas in contact with acids.

Most serious adverse effects on human health and the environment

Direct contact with the eyes causes eye irritation (redness, burning, tearing). It may occur if ingested abdominal pain and nausea. Ensure against confusion with drinks and food. The mixture is not classified as dangerous for aquatic organisms and components of the environment. Prevent leakage into sewers, soil, underground and surface water. Follow the instructions for use to they avoided risks to people and the environment.

The full wording of the H-phrases is given in Sect. 16 of this safety data sheet.



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2.2. Label elements

Hazard pictogram



Signal word

Warning

Hazard statements

H319 Causes serious eye irritation.

Precautionary statements

P262 Do not get in eyes, on skin, or on clothing. P302+P352 IF ON SKIN: Wash with plenty of water.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact

lenses, if present and easy to do. Continue rinsing.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P501 Dispose of contents/container to in accordance with local regulations.

Supplemental information

EUH032 Contact with acids liberates very toxic gas.

2.3. Other hazards

Neither the mixture nor its components meet the criteria for persistent, bioaccumulative and toxic or highly persistent and highly bioaccumulative substances in accordance with Annex XIII, nor have they been included in the list drawn up in accordance with Article 59, paragraph 1, due to the content of endocrine disruptors, nor has it been determined as a substance 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 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Mixture.

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
	Amines C12-14-alkyldimethyl, N-oxides	<1	Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 2, H411 Specific concentration limit: Acute Tox. 4, H302: $C \ge 3\%$ Eye Irrit. 2, H319: $C \le 3\%$ Aquatic Acute 1, H400; Aquatic Chronic 2, H411: $C \ge 25\%$	



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Identification numbers	Substance name	Content in % weight	Classification according to Regulation (EC) No 1272/2008	Note
CAS: 7758-19-2 EC: 231-836-6	Sodium chlorite	,	Ox. Sol. 1, H271 Acute Tox. 3, H301 Acute Tox. 2, H310 Skin Corr. 1B, H314 STOT RE 2, H373 Aquatic Acute 1, H400 EUH032 EUH071 Specific concentration limit: Skin Corr. 1, H314: $C \ge 5$ % Skin Irrit. 2, H315: $1 \% \le C < 5$ % STOT RE 2, H373: $C \ge 10$ %	

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

In the event of health problems or in case of doubt, consult a doctor and provide him with information from this safety data sheet. In case of life-threatening conditions, perform resuscitation. An unconscious person place in a stable position and do not give anything by mouth. If necessary (respiratory arrest or irregular breathing) perform artificial respiration. Avoid catching cold. Do not induce vomiting. At by spontaneous vomiting, prevent inhalation of vomitus.

If inhaled

Interrupt the exposure, rinse the oral cavity with water, breathe fresh air. They appeared respiratory tract irritation or breathing difficulties, seek medical attention.

If on skin

Remove affected clothing. Wash thoroughly with soap and water and treat with a regenerating cream. Seek medical attention if irritation symptoms appear and persist.

If in eyes

Rinse the eyes and their surroundings. If the victim wears contact lenses, remove them. Eyes wide open rinse from the inner corner of the eye towards the outer with a large amount of clean lukewarm water, esp space under the lids. Rinse for at least 15 min., seek medical treatment.

If swallowed

Do not induce vomiting, rinse mouth with water. Drink a glass of cold water (if affected by conscious and not in pain). Seek medical attention and present this safety data sheet.

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

If inhaled

not available

If on skin

Long-term or repeated contact with the skin can cause skin degreasing.

If in eyes

It irritates the eyes (redness, burning, tearing).

If swallowed

Causes abdominal pain if ingested.

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

In the case of the usual use of the mixture and following the instructions in the instructions for use, immediate medical assistance is not required. Special treatment is required if symptoms of a certain degree occur, according to the data in sections 4.1 and 4.2; is symptomatic.



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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Multipurpose powders, CO2, foam, water mist, sand.

Unsuitable extinguishing media

Full stream of water.

5.2. Special hazards arising from the substance or mixture

The mixture contains a strong oxidant in small quantities. Reacts violently with acids. Imperfect thermal decomposition at high temperatures may release dangerous gases (COx, NOx, small amounts chlorine). Avoid inhalation.

5.3. Advice for firefighters

Adapt protective equipment to the nature of the fire (self-contained breathing apparatus, emergency suit). Combustion residues and water after intervention should be disposed of as hazardous waste.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Prevent the entry of unauthorized persons, secure and isolate the escape area. Ensure adequate ventilation work area, do not inhale the sprayed mixture or mist. Avoid contact with eyes and skin - use personal protective equipment. Ensure against confusion with drinks.

6.2. Environmental precautions

Secure the area of the leak, catch the leaking mixture. Prevent leakage into drains, soil, surface and groundwater. In the event of a large liquid leak, monitor the NPK concentration or TLV and inform the relevant state authorities and the manager of the stream or sewer.

6.3. Methods and material for containment and cleaning up

In case of a large leak, pump out the mixture. In case of a small leak, cover with a suitable sorbent (universal sorbent, sand, diatomaceous earth, soil, vermiculite, etc.), store the used sorbent in a closable waste containers, label and dispose of as hazardous waste. Wash the contaminated area.

6.4. Reference to other sections

See the Section 7, 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Protect eyes and skin, do not inhale the sprayed mixture, use personal protective equipment according to sec. 8. Ensure against confusion with drinks. Avoid contact with heat sources. The workspace should be equipped a source of drinking water for providing first aid.

Observe the applicable health and safety legislation. Follow the principles of work hygiene

with chemicals, do not eat, drink or smoke while working. Wash your hands with warm water before breaks, meals and after work

soapy water. Avoid release to the environment.

7.2. Conditions for safe storage, including any incompatibilities

Store tightly closed with the cap facing upwards in the original packaging in well-ventilated places. Store excluding food, beverages and feed. The warehouse should be equipped with a source of drinking water. Store away from strong acids. Store out of reach of children.

Do not store together with oxidizing agents, acids, acid-forming substances, acidic substances (Aluminum sulfate, polyaluminium hydroxide chloride, Fe-chlorides).

Avoid contact with: oils, lubricants, organic materials (wood, paper, organic chemicals),

Follow the directions on the label.

Content	Packaging type	Material of package
1	bottle	PE
10	jerry can	PE

Storage temperature

min 5 °C, max 25 °C

7.3. Specific end use(s)

not available



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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

The mixture does not contain any constituents of national exposure limits specified in Annex 2, Government Decree 361/2007 Coll., As amended or European Union for Work Environment.

DNFI

Amines C12-14-alkyldimethyl, N-oxides					
Workers / consumers	Route of exposure	Value	Effect	Value determination	Source
Workers	Inhalation	6.2 mg/m ³	Chronic effects systemic		
Workers	Dermal	11 mg/kg bw/day	Chronic effects systemic		

Sodium chlorite					
Workers / consumers	Route of exposure	Value	Effect	Value determination	Source
Workers	Inhalation	0.41 mg/m ³	Chronic effects systemic		
Workers	Dermal	0.58 mg/kg	Chronic effects systemic		

8.2. Exposure controls

Ensure sufficient ventilation, or extraction of the working space. In case of insufficient ventilation or spray application, use appropriate respiratory protection. Avoid contact

concentrated mixtures with skin and eyes. Ensure against confusion with drinks and food.

Observe hygienic measures for working with chemicals. The work area should be equipped with sources of drinking water

water. Do not eat, drink or smoke while working. Wash your hands with lukewarm water before breaks, meals and after work

with soap. Adapt personal protective equipment to the nature of the work.

Eye/face protection

Protective goggles.

Skin protection

Protective work clothing and footwear. Wash affected skin, remove contaminated clothing, before wash after next use. Not necessary. Use with increased sensitivity or long-term or repeated exposure safety gloves. When choosing, follow the manufacturer's recommendations, the material must be impermeable and resistant to mixture components. Test at a specific workplace before first use. Replace damaged gloves.

Respiratory protection

It is not necessary to observe the recommended operating instructions and adequate ventilation.

Thermal hazard

Not Specified. Avoid heating the mixture and exposure to elevated temperatures.

Environmental exposure controls

Observe the usual environmental precautions. Avoid leakage into sewers, underground and surface water and soil.

More information

Ensure compliance with governmental regulation 361/2007 Coll., Laying down the conditions for the protection of health at work, as amended, and to fulfill the obligations contained therein.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state liquid
Colour colourless
Odour characteristic
Melting point/freezing point data not available
Boiling point or initial boiling point and boiling range data not available



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Flammability data not available Lower and upper explosion limit data not available Flash point data not available Auto-ignition temperature data not available Decomposition temperature data not available 6-8 (10% solution) Kinematic viscosity data not available Solubility in water miscible Partition coefficient n-octanol/water (log value) data not available Vapour pressure data not available Density and/or relative density data not available Relative vapour density data not available Particle characteristics data not available

9.2. Other information

Density and/or relative density (at 20°C): Approx. 930 kg/m3.

The mixture contains an oxidizing component.

SECTION 10: Stability and reactivity

10.1. Reactivity

There is no danger of reaction if the recommended use is adhered to. The mixture is strongly acidic, risk of exothermic reaction on contact with bases.

10.2. Chemical stability

The mixture is stable under normal environmental conditions, storage and handling.

10.3. Possibility of hazardous reactions

Reacts with strong acids or oxidizing agents.

10.4. Conditions to avoid

Avoid contact with acids - poisonous and explosive gas (chlorine dioxide) can be produced.

10.5. Incompatible materials

Isolate from explosive substances, highly flammable substances, easily oxidizable materials, acids, acid-forming substances, acidic substances (aluminum sulfate, polyaluminium hydroxide chloride, Fe-chlorides). Avoid contact with: oils, lubricants, organic materials (wood, paper, organic chemicals).

10.6. Hazardous decomposition products

Under normal conditions, the mixture does not decompose. They are formed by thermal decomposition at high temperatures

dangerous decomposition products: COx, chlorine, etc.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

The mixture meets the criteria for classification according to EC Regulation No. 1272/2008. The mixture is classified as dangerous in the sense of EC Regulation No. 1272/2008, as amended.

Acute toxicity

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

Skin corrosion/irritation

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

Serious eye damage/irritation

The mixture is classified as eye irritant, category 2. Causes serious eye irritation.

Respiratory or skin sensitisation

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



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Germ cell mutagenicity

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

Carcinogenicity

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

Reproductive toxicity

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

Toxicity for specific target organ - single exposure

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

Toxicity for specific target organ - repeated exposure

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

Aspiration hazard

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

11.2. Information on other hazards

It does not contain substances causing disruption of the endocrine system.

It irritates the eyes (redness, burning, tearing). Long-term or repeated contact with the skin can cause skin degreasing. Causes abdominal pain if ingested.

SECTION 12: Ecological information

12.1. Toxicity

The ecotoxic effects of the mixture were not assessed. Observe the usual environmental precautions.

12.2. Persistence and degradability

The components of the mixture are gradually decomposable, they become inactive folders.

12.3. Bioaccumulative potential

Not determined, bioaccumulation is unlikely.

12.4. Mobility in soil

Well miscible with water.

12.5. Results of PBT and vPvB assessment

The mixture does not contain substances from the PBT and vPvB groups according to Annex XIII of the REACH Regulation, as amended.

12.6. Endocrine disrupting properties

Substances with these properties in accordance with the criteria set out in Commission Regulation (EU) 2017/2100 or (EU) 2018/605 are not included.

12.7. Other adverse effects

not available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Dispose of as waste, hand over for disposal to a person authorized to handle chemical substances or to hazardous waste collection yard. Treat contaminated packaging as you would your own dangerous mixture. Do not pour unused product down the drain or dispose of it together with municipal waste. A small amount after neutralization or dilution can be discharged into the sewer. At the disposal of mixture and packaging residues must be carried out in accordance with local disposal regulations wastes.

Waste management legislation

Act No. 477/2001 Coll., On Packaging, as amended. Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste, as amended.



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Waste type code

16 03 03* inorganic wastes 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

not subject to transport regulations

14.2. UN proper shipping name

not relevant

14.3. Transport hazard class(es)

not relevant

14.4. Packing group

not relevant

14.5. Environmental hazards

not relevant

14.6. Special precautions for user

Transport in packages that match the properties of the mixture. Observe the prescribed marking for cargo.

14.7. Maritime transport in bulk according to IMO instruments

not relevant

R

SECTION 15: Regulatory information

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

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. COMMISSION REGULATION (EU) 2020/878 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH). Commission Delegated Regulation (EU) 2021/849 of 11 March 2021 amending, for the purposes of adapting to technical and scientific progress, Part 3 of Annex VI to Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labeling and packaging of substances and mixtures. REGULATION (EC) No 648/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 31 March 2004 on detergents, as ammended.Commission Regulation (EU) No 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorization and Restriction of Chemicals.

15.2. Chemical safety assessment

No chemical hazard assessment was performed for this mixture.

More information

This information only indicates the basic regulations listed in this Safety Data Sheet. Please note the possible existence of additional regulations supplementing these Regulations. We refer to all applicable national, international and local regulations and regulations.

SECTION 16: Other information

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

H271	May cause fire or explosion; strong oxidiser.
11201	Ti- :6I

H301 Toxic if swallowed.
H302 Harmful if swallowed.
H310 Fatal in contact with skin.

H314 Causes severe skin burns and eye damage.

H315 Causes skin irritation.



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H318 Causes serious eye damage. H319 Causes serious eye irritation.

May cause damage to organs through prolonged or repeated exposure. H373

H400 Very toxic to aquatic life.

Toxic to aquatic life with long lasting effects. H411

Guidelines for safe handling used in the safety data sheet

P262 Do not get in eyes, on skin, or on clothing. P302+P352 IF ON SKIN: Wash with plenty of water.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact P305+P351+P338

lenses, if present and easy to do. Continue rinsing.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

Dispose of contents/container to in accordance with local regulations.

A list of additional standard phrases used in the safety data sheet EUH032 Contact with acids liberates very toxic gas.

EUH071 Corrosive to the respiratory tract. Other important information about human health protection

The mixture should not be used for any purpose other than that for which it is intended (see point 1.2). Because the supplier can not control the specific conditions of use of the mixture, it is the responsibility of the user to adapt the prescribed warnings to local laws and regulations. Safety information describes the product in terms of safety and

can not be considered as technical product information.

Key to abbreviations and acronyms used in the safety data sheet

European agreement concerning the international carriage of dangerous goods by ADR

road

BCF Bioconcentration Factor Chemical Abstracts Service CAS

Regulation (EC) No 1272/2008 on classification, labelling and packaging of CL P

substance and mixtures

FC Identification code for each substance listed in EINECS

EINECS European Inventory of Existing Commercial Chemical Substances

FmS Emergency plan 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 International Organization for Standardization ISO **IUPAC** International Union of Pure and Applied Chemistry

log Kow Octanol-water partition coefficient NPK Maximum admissible concentration OEL Occupational Exposure Limits PBT Persistent, Bioaccumulative and Toxic

PEL Permissible Exposure Limit

ppm Parts per million

Registration, Evaluation, Authorisation and Restriction of Chemicals REACH

RID Agreement on the transport of dangerous goods by rail

HIN 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



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vPvB Very Persistent and very Bioaccumulative

Acute Tox. Acute toxicity

Aquatic Acute Hazardous to the aquatic environment

Aquatic Chronic Hazardous to the aquatic environment (chronic)

Eye Dam. Serious eye damage Ox. Sol. Oxidising solid Skin Corr. Skin corrosion

STOT RE Specific target organ toxicity - repeated exposure

Training guidelines

According to § 103 and § 104 of Act No. 262/2006 Coll., The Labor Code, as amended. 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

Manufacturer data and toxicological databases.

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

Adaptation of BL updated Annex II of the REACH Regulation as amended by Commission Regulation (EU) 2020/878.

Statement

The safety data sheet contains the data needed to ensure safety and health at work and environmental protection. These data correspond to the current state of knowledge and experience and are in accordance with applicable legal regulations. They can not be considered as a guarantee of the suitability and usability of the product for a specific application. The user is responsible for the treatment under existing laws and regulations.