

MATERIAL SAFETY DATA SHEET

prepared in accordance with 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 on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (Official Journal of the European Union No L 203, 26/06/2020)

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND IDENTIFICATION ENTERPRISES

1.1 Product ID

CLEANSER PRINT

UFI number: R410-H0X4-E00T-EEYW

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

Identified uses: Product intended for cleaning/washing industrial equipment.

Uses advised against: None known.

1.3 Details of the supplier of the safety data sheet

Supplier:

Micro Chip Electronic Barbara Kaczmarczyk ul.
Kochanowskiego 9
40-035 Katowice
Phone +48 503 017 712

E-mail of the person responsible for the safety data sheet: info@micro-chip.pl

1.4 Emergency telephone number

Emergency number in Poland (open 9:00-15:00): + 48 503 017 712

Date of preparation: 16/03/2023

SECTION 2: HAZARD IDENTIFICATION

2.1 Classification of the substance or mixture

~~**Classification according to Regulation (EC) No 1272/2008 as amended:**~~

Flammable liquids, hazard category 2 (Flam. Liq. 2)

Highly flammable liquid and vapour. (H225)

Serious eye damage/eye irritation, hazard category 2 (Eye Irrit. 2)

Causes serious eye irritation. (H319)

Specific target organ toxicity – single exposure, hazard category 3, narcotic effects (STOT SE 3)

May cause drowsiness or dizziness. (H336)

Health hazards:

In case of significant concentrations of vapors or direct contact of the product with the eyes, irritation, redness, tearing, burning, conjunctivitis may occur. Contamination of the skin with a large amount of the product may cause redness, itching and dryness of the skin. Inhalation of vapors in high concentrations causes headache and dizziness, nausea, shortness of breath, respiratory disorders, impaired consciousness, loss of consciousness. Ingestion may cause irritation of the gastrointestinal mucosa, nausea, vomiting and diarrhea.

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Effects on the environment:

When used properly, it does not pose a threat to the environment.

Effects related to physicochemical properties:

Product vapors are heavier than air, they can create explosive mixtures with air. They accumulate near the ground and in the lower parts of rooms. Containers exposed to fire or high temperatures may explode.

2.2 Labeling elements

Pictograms:



Signal Word: **Danger**

Hazard statements:

H225 - Highly flammable liquid and vapour.
H319 - Causes serious eye irritation.
H336 - May cause drowsiness or dizziness.

Precautionary statements:

P102 - Keep out of reach of children.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 - Avoid breathing vapours.
P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P312 - Call a POISON CENTER/doctor if you feel unwell.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 - If eye irritation persists: Get medical advice/attention.

Additional labeling requirements:

Contains: propan-2-ol.

2.3 Other threats

The mixture does not meet the PBT and vPvB criteria. It does not contain any ingredients considered to be endocrine disrupting according to Article 57(f) of the REACH Regulation or Regulation (EU) 2017/2100 or Regulation (EU) 2018/605 at a concentration of 0.1% or higher.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.2 Mixtures

Product ID: CLEANSER PRINT

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Ingredients of the mixture:

Name of the substance	index number	CAS No.	EC No.	ul. mass in %	Classification according to Regulation (EC) No 1272/2008	
					Hazard classes and Category Codes	Return codes indicating type threats
Propan-2-ol	603-117-00-0	67-63-0	200-661-7	95	Flam. Liq. 2 Eye Irrit. 2 STOT SE 3	H225 H319 H336
Ethyl acetate	607-022-00-5	141-78-6	205-500-4	γ 0.9	Flam. Liq. 2 Eye Irrit. 2 STOT SE 3	H225 H319 H336 EUH066
n-Hexane	601-037-00-0	110-54-3	203-777-6	γ 0.5	Flam. Liq. 2 Repr. 2 Asp. Tox. 1 Skin Irrit. 2 STOT SE 3 STOT RE 2 Aquatic Chronic 2	H225 H361f H304 H315 H336 H373 H411 <i>Specific</i> <i>concentration limit:</i> STOT RE 2; H373: C γ 5%

The full text of H phrases and the acronyms of symbols, hazard classes and category codes are given in Section 16 of the Safety Data Sheet.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

- Inhalation:** Remove the injured person from the place of exposure, place them in a comfortable half-sitting or sitting position, ensure calmness, protect against heat loss. If breathing difficulties occur, apply artificial respiration. If symptoms persist, call doctor.
- Skin contact:** Rinse immediately with plenty of water, remove contaminated clothing, wash skin with plenty of soap and water. If necessary, consult a doctor.
- Eye contact:** Rinse immediately with plenty of lukewarm water, preferably running water, for at least 15 minutes. Remove contact lenses. Avoid strong water jets due to the risk of mechanical damage to the cornea. If irritation persists, consult an ophthalmologist.
- Digestive tract:** If a large quantity is swallowed, do not induce vomiting. Rinse mouth with plenty of water. If the victim is conscious, give plenty of water. If necessary, call a doctor.

4.2 Most important acute and delayed symptoms and effects of exposure In case of significant concentrations of vapours or direct contact of the product with the eyes, irritation, redness, tearing, burning, conjunctivitis may occur. Contamination of the skin with a large amount of the product may cause redness, itching and dryness of the skin. Inhalation of vapours in high concentrations causes pain and dizziness.

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headaches, nausea, shortness of breath, respiratory disorders, impaired consciousness, loss of consciousness. After ingestion, irritation of the gastrointestinal mucosa, nausea, vomiting and diarrhea may occur.

4.3 Indications of any immediate medical attention and special treatment for the injured person

No special recommendations. Treat symptomatically. Provide the attending physician with the safety data sheet.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media:

Foam, carbon dioxide, extinguishing powders, water – dispersed currents.

Inappropriate extinguishing media:

Do not use dense streams of water on the surface of the liquid.

5.2 Special hazards arising from the substance or mixture

In case of fire, carbon monoxide and carbon dioxide may be produced.

5.3 Information for the fire brigade

Highly flammable liquid and vapour. Vapours form explosive mixtures with air, are heavier than air and accumulate near the ground and in lower parts of rooms. Cool containers exposed to fire from a safe distance with a sprayed water jet (explosion hazard); if possible, remove them from the endangered area. Gas-tight clothing in antistatic version, insulating respiratory protective equipment.

SECTION 6: MEASURES IN THE EVENT OF ACCIDENTAL ENVIRONMENTAL RELEASES

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use protective clothing made of natural materials (cotton) or synthetic fibers, gloves made of nitrile or butyl (thickness 0.4 – 0.05 mm, breakthrough time – 480 min) and safety glasses such as goggles. Remove sources of ignition (extinguish open flames, announce a ban on smoking and use of sparking tools). Remove unprotected persons and those not involved in eliminating the failure from the endangered area. Avoid direct contact with the mixture. Avoid inhalation of vapors.

6.2 Environmental precautions

Prevent entry into sewers, surface and ground waters and soil.

6.3 Methods and materials for containment and cleaning up

Secure drains. If possible, eliminate leaks (close liquid supply, seal).

Place damaged packaging in a replacement container. Dilute vapors with a dispersed stream of water.

Remove sources of ignition (extinguish open flames, announce a ban on smoking and use of sparking tools). Absorb small quantities in a chemically inert binding material (sand, diatomaceous earth), transfer to tightly closed containers and send for disposal.

6.4 References to other sections

Dispose of in accordance with the recommendations in section 13.

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SECTION 7: HANDLING AND REMEDIES OF SUBSTANCES AND MIXTURES STORAGE

7.1 Precautions for safe handling

Ensure adequate general and local ventilation. Keep away from sources of high temperature and sources of ignition. It is advisable to take precautions to avoid contact with skin and eyes when working with the mixture. Do not inhale vapours.

Prevent from entering sewage system, surface water and groundwater. Do not eat, drink or smoke during use. Wash hands during breaks and after finishing work.

Remove contaminated clothing and wash before re-wearing.

7.2 Conditions for safe storage, including information on any mutual inconsistency

Store in original, properly labeled, tightly closed containers, in a cool, dry, well-ventilated storage room, equipped with explosion-proof electrical and ventilation systems. Store away from sources of high temperature, sources of ignition, oxidizers. Protect from sunlight.

7.3 Specific end use(s)

No information on uses other than those mentioned in section 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Legal basis:

Regulation of the Minister of Family, Labor and Social Policy of June 12, 2018, on the maximum permissible concentrations and intensities of factors harmful to health in the work environment (Journal of Laws, item 1286, 2018); Regulation of the Minister of Family, Labor and Social Policy of January 9, 2020 amending the regulation on the maximum permissible concentrations and intensities of factors harmful to health in the work environment (Journal of Laws, item 61, 2020);

Regulation of the Minister of Development, Labour and Technology of 18 February 2021 amending the regulation on the maximum permissible concentrations and intensities of factors harmful to health in the work environment (Journal of Laws, item 325, 2021).

<u>Name of the substance</u>	<u>CAS</u>	<u>Standard</u>	<u>value</u>	<u>unit</u>
Propan-2-ol	No. 67-63-0	NDS	900	mg/m3
		NDSch	1200	mg/m3
		NDSP	not determined	
Ethyl acetate	141-78-6	(skin) NDS	734	mg/m3
		NDSch	1468	mg/m3
		NDSP	not assigned	
Hexane	110-54-3	NDS	72	mg/m3
		NDSch and NDSP	not determined	
		(skin)		

The skin notation indicates that absorption of the substance through the skin may be as important as inhalation exposure.

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Propan-2-ol:

DNEL values spicy for employees: _____

888 mg/kg (skin) - local

Long-term DNEL values for workers: _____

500 mg/m³ (inhalation) – local DNEL values for the general public: _____

319 mg/kg (skin) - local

Long-term DNEL values for the general public: _____

89 mg/m³ (respiratory) - local PNEC values: _____

140.9 mg/l (freshwater)

140.9 mg/l (sea water)

552 mg/l (sediment - fresh and sea water)

28 mg/kg (soil)

8.2 Exposure Control

8.2.1 Appropriate technical control measures

Local exhaust ventilation to remove vapors from their emission points and general room ventilation are required. Local ventilation intake openings at the work surface or below. General ventilation exhausts at the top of the room and at the floor. Ventilation systems must meet the conditions established with regard to the risk of fire or explosion. Do not use near sources of high temperature and sources of ignition. In the event of insufficient ventilation, use respiratory protection. Provide an eyewash station.

8.2.2 Individual protection measures, such as personal protective equipment

Respiratory tract: If the permissible concentrations of product vapours are exceeded, respiratory protection with a particle filter marked in white and the symbol P2 and a vapour filter marked in brown and the letter A should be used. AP combination filters may be used.

Hands and skin: When handling large quantities, use protective clothing made of natural materials (cotton) or synthetic fibers, gloves made of nitrile or butyl (thickness 0.4 ÷ 0.05 mm, breakthrough time ÷ 480 min).

Eyes: Wear protective glasses such as goggles.

Occupational hygiene: General industrial hygiene regulations apply. Do not exceed permissible normative concentrations in the workplace environment. After finishing work, remove contaminated clothing. Before breaks in work, wash hands and face. After work, wash the whole body thoroughly. Do not eat, drink, or smoke while working.

8.2.3 Environmental exposure controls

Prevent entry into watercourses.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

- a) State of matter:
Liquid.
- b) Colour
Colourless.
- c) Alcohol
Smell.

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d) Melting/freezing point - 88 °C.

e) Boiling point or initial boiling point and boiling range
82 – 83 °C.

f) Flammability of materials
Flammable mixture. g)

Lower and upper explosion limits Upper: 12 % by
volume.

Lower: 2 % vol. h)

Flash point 12 °C (IP 170) i)

Auto-ignition

temperature 425 °C. j) Decomposition

temperature No data available.

k) pH No data

available. l) Kinematic

viscosity Dynamic viscosity:

2.43 mPa.s (20 °C) m) Solubility Soluble in water.

Easily soluble in most
organic solvents.

n) n-octanol/water partition coefficient (log coefficient value)
0.05.

o) Vapor pressure
6.020 Pa.

p) Density or relative density
0.785 – 0.786 at 20 °C (water = 1). q)

Relative vapour density 2 (air =
1). r) Particle

characteristics Not applicable 9.2
Other

information 9.2.1. *Information on*

physical hazard classes a) Explosives: Not applicable. b) Flammable gases: Not
applicable. c) Aerosols: Not applicable. d)

Oxidizing gases: Not applicable. e) Gases
under pressure: Not applicable.

f) Flammable liquids: Flam. Liq. 2; Highly
flammable liquid and vapour. g) Flammable

solids: Not applicable. h) Self-reactive substances and mixtures: Not applicable. i)

Pyrophoric liquids: Not applicable. j) Pyrophoric

solids: Not applicable. k) Self-heating substances and mixtures: Not

applicable. l) Substances and mixtures which in contact
with water emit flammable gases: Not applicable. m)

Oxidizing liquids: Not applicable. n) Oxidizing solids: Not applicable. o) Organic

peroxides: Not applicable. p) Corrosive to metals: Not applicable. q) Desensitized explosives: Not applicable.

9.2.2. *Other safety properties* a) mechanical
sensitivity: No data available.

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b) self-accelerating polymerisation temperature: No data. c) formation of explosive dust/air mixture: Not applicable. d) acid/base reserve: No data. e) evaporation rate: No data. f) miscibility: completely miscible with water. g) conductivity: No data. h) corrosive effect: No data. i) gas group: Not applicable. j) redox potential: No data. k) radical formation potential: No data. l) photocatalytic properties; No data.

SECTION 10: STABILITY AND REACTIVITY

- 10.1 Reactivity No
reactivity when stored and handled as intended.
- 10.2 Chemical stability
Under normal conditions of use and storage the product is stable.
- 10.3 Possibility of hazardous reactions
Product vapors with air may form explosive mixtures.
- 10.4 Conditions to avoid
Ignition sources, open flames, heat, direct sunlight.
- 10.5 Incompatible Materials
Strong oxidizers.
- 10.6 Hazardous decomposition products
None known.

SECTION 11: TOXICOLOGICAL INFORMATION

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

Acute toxicity: Based

on available data, the classification criteria are not met.

Propan-2-ol:

LD50 – oral, rat: > 5000 mg/kg DL50 – skin, rabbit: > 5000

mg/kg CL50 – inhalation, rat >5 mg/l Skin

corrosion/irritation: Based on available data,

the classification criteria are not met.

Serious eye damage/eye irritation: Causes serious eye irritation.

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:

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

Specific target organ toxicity – single exposure:

May cause drowsiness or dizziness.

Specific target organ toxicity – repeated exposure:

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

Aspiration hazard:

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

11.2 Information about other threats

11.2.1. Endocrine disrupting properties

Does not contain ingredients that are considered to disrupt the functioning of the endocrine system in accordance with Art. 57(f) of the REACH Regulation or Regulation (EU) 2017/2100 or Regulation (EU) 2018/605 at a concentration of 0.1% or higher.

11.2.2. Other information

No data available.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

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

Propan-2-ol:

Dose	value	unit.
CL50 – fish (<i>Pimephales promelas</i>)	9640-11130	mg/l (96h)
CL50 – fish (<i>Carassius auratus</i>)	> 5000	mg/l (24h)
CL50 - fish (<i>Leuciscus idus melanotus</i>)	8970-9280	mg/l (48h)
CE50 – invertebrates (<i>Daphnia magna</i>)	> 10000	mg/l (24h)
CE50 – algae (<i>Scenedesmus subspicatus</i>)	> 1000	mg/l (72h)
CE50 – bacteria (<i>Pseudomonas putida</i>)	1050	mg/l (16h)
CE50 – protozoa (<i>Entosiphon sulcatum</i>)	4930	mg/l (72h)

12.2 Persistence and degradability

Propan-2-ol: readily biodegradable (> 70 % after 10 days; > 95 % after 28 days, OECD 301 E).

12.3 Bioaccumulative potential

Propan-2-ol has a low potential for bioaccumulation.

Octanol/water partition coefficient (log Ko/w): 0.05

Bioconcentration factor (BCF): No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

The mixture does not meet the PBT and vPvB criteria.

12.6 Endocrine disrupting properties

Does not contain ingredients that are considered to disrupt the functioning of the endocrine system in accordance with Art. 57(f) of the REACH Regulation or Regulation (EU) 2017/2100 or Regulation (EU) 2018/605 at a concentration of 0.1% or higher.

12.7 Other harmful effects

No data available.

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SECTION 13: WASTE CONSIDERATIONS

13.1 Waste disposal methods

Do not dispose of the product together with municipal waste, do not introduce it into the sewage system. Do not allow contamination of ground and surface water.

Hazardous waste*:

HP 3 "Flammable"

HP 4 "Irritating"

HP 5 "Specific Target Organ Toxicity (STOT)"

*COMMISSION REGULATION (EU) No 1357/2014 of 18 December 2014 replacing Annex III to Directive 2008/98/EC of the European Parliament and of the Council on waste and repealing certain Directives (Official Journal of the EU, L.365, December 2014).

Empty used packaging thoroughly. Disposable packaging (after thorough cleaning) should be sent for recycling.

Special precautions:

Dispose of the product and its packaging safely. Use caution when handling empty containers that have not been thoroughly cleaned. Vapours from product residues may create a flammable or explosive atmosphere inside the container. Do not cut or weld used containers unless they have been thoroughly cleaned.

Legal basis:

Announcement of the Speaker of the Sejm of the Republic of Poland of 16 April 2020 on the announcement of the consolidated text of the Act on Waste (Journal of Laws, item 797, 2020).

Announcement of the Speaker of the Sejm of the Republic of Poland of 1 December 2022 on the announcement of the uniform text of the act on the management of packaging and packaging waste (Journal of Laws, item 160, 2023)

REGULATION OF THE MINISTER OF CLIMATE of 2 January 2020 on the waste catalogue (Journal of Laws, item 10, 2020).

SECTION 14: TRANSPORT INFORMATION

ADR/RID, IMDG, IATA

14.1 UN number or ID number

1219

14.2 UN proper shipping name

ISOPROPANOL (ISOPROPYL ALCOHOL)

14.3 Transport hazard class(es)

3

14.4 Packing group

2

14.5 Environmental hazards

The product does not pose a hazard to the environment according to the criteria of the UN Model Regulations.

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14.6 Special precautions for users

Always transport in closed containers that are upright and properly secured. Make sure that those transporting the product know what to do in the event of a failure or spill.

14.7 Bulk sea transport in accordance with IMO instruments

Not applicable.

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental protection regulations specific to mixtures

ANNOUNCEMENT OF THE MARSHAL OF THE SEJM OF THE REPUBLIC OF POLAND of 22 July 2022 on the announcement of the uniform text of the act on chemical substances and their mixtures (Journal of Laws, item 1816, 29/08/2022).

REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 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 (Official Journal of the European Union, series L, No 353 of 31 December 2008) with subsequent amendments (adaptations to technical progress 1 - 18 ATP).

REGULATION (EU) 2016/425 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 9 March 2016 on personal protective equipment and repealing Council Directive 89/686/EEC (Official Journal of the EU, series L/81 of 31.03.2016).

Regulation of the Minister of Family, Labor and Social Policy of June 12, 2018 on the maximum permissible concentrations and intensities of harmful health factors in the work environment (Journal of Laws, item 1286, 2018)

REGULATION OF THE MINISTER OF FAMILY, LABOUR AND SOCIAL POLICY of 9 January 2020 amending the regulation on the maximum permissible concentrations and intensities of factors harmful to health in the work environment (Journal of Laws item 61, 2020)

Regulation of the Minister of Development, Labor and Technology of February 18, 2021 amending the regulation on the maximum permissible concentrations and intensities of factors harmful to health in the work environment (Journal of Laws, item 325, 2021).

Regulation of the Minister of Health of 2 February 2011 on tests and measurements of factors harmful to health in the work environment (Journal of Laws No. 33, item 166, 2011).

Announcement of the Minister of Health of 9 September 2016 on the announcement of a uniform text of the regulation of the Minister of Health on occupational health and safety related to the presence of chemical factors in the workplace (Journal of Laws, item 1488, 2016)

Government Statement of 26 July 2005 on the entry into force of amendments to Annexes A and B of the European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) concluded in Geneva on 30 September 1957 (Journal of Laws No. 178, item 1481, 2005 with subsequent amendments).

Announcement of the Speaker of the Sejm of the Republic of Poland of 16 April 2020 on the announcement of the consolidated text of the Act on Waste (Journal of Laws, item 797, 2020).

Announcement of the Speaker of the Sejm of the Republic of Poland of 1 December 2022 on the announcement of the uniform text of the act on the management of packaging and packaging waste (Journal of Laws, item 160, 2023)

REGULATION OF THE MINISTER OF CLIMATE of 2 January 2020 on the waste catalogue (Journal of Laws, item 10, 2020).

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a 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

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Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC (Official Journal of the European Union, series L No 396 of 30 December 2006, as amended).

15.2 Chemical safety assessment

The supplier did not perform a chemical safety assessment of the mixture.

SECTION 16: OTHER INFORMATION

The card was developed in the **Łukasiewicz Research Network - the Institute of Industrial Chemistry named after Professor Ignacy Mościcki in Warsaw** based on the recipe and ingredient safety data sheets.

The information provided in the safety data sheet is intended to describe the product only from the point of view of safety requirements. The user is responsible for creating conditions for safe use of the product and it is the user who takes responsibility for the consequences resulting from improper use of this product.

H phrases and acronyms of symbols, hazard classes and category codes used in Section 3. Safety data sheets:

H225	Highly flammable liquid and vapour.
H319	Irritating to eyes.
H304	May be fatal if swallowed and enters airway.
H315	Irritating to skin.
H336	May cause drowsiness or dizziness.
H361f	Suspected of damaging fertility.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.
Flam. Liq. 2	Flammable liquids, hazard category 2
Eye Irrit. 2	Serious eye damage/eye irritation, hazard category 2.
Asp. Tox. 1	Aspiration Hazard Category 1.
Skin Irrit. 2	Skin corrosion/irritation, hazard category 2.
STOT SE 3	Specific target organ toxicity – single exposure, hazard category 3, narcotic effect.
Repr. 2	Reproductive toxicity, hazard category 2.
STOT RE 2	Specific target organ toxicity – repeated exposure, hazard category 2.
Aquatic Chronic 2 Hazardous to the aquatic environment – chronic hazard, category 2	

Abbreviations:

OEL - The highest permissible concentration at the workplace - the highest permissible weighted average concentration, the impact of which on an employee during an 8-hour working time, throughout his entire professional activity, should not cause any changes in his health or in the health of his future generations

OELCh - Maximum allowable momentary concentration - the highest allowable momentary concentration established as an average value that should not cause negative changes in the health of the employee and in the health of his future generations if it is maintained in the work environment for no longer than 30 minutes during a work shift

NDSP - concentration value which cannot be exceeded at any time in the work environment due to a threat to the health or life of an employee

vPvB - Very persistent and very bioaccumulative substance

PBT - Persistent, Bioaccumulative and Toxic

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DL50 – Lethal dose – a dose at which 50% of the tested animals die within a specified time period.

CL50 – Lethal concentration - concentration at which 50% of the tested animals die within a specified time period.

CE50 – Effective concentration – effective concentration of a substance causing a response of 50% of the maximum values

BCF - Bioconcentration factor (bioconcentration) - the ratio of the concentration of a substance in an organism to its concentration in water at equilibrium

ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road
Agreement on Dangerous Goods by Road)

RID – Regulations Concerning the International Transport of Dangerous Goods by Rail

IMDG – International *Maritime Dangerous Goods Code*

IATA - International Air Transport Association *International Air Transport Association*)

IMO - International Maritime Organization

CAS – the number assigned to a chemical substance in the *Chemical Abstracts Service* inventory

EC - reference number used in the European Union to identify dangerous substances, in particular those registered in the European Inventory of Existing Chemical Substances (EINECS), or in the European List of Notified Chemical Substances (ELINCS), or the list of chemical substances listed in the publication "No-longer polymers"

UN number – a four-digit identification number of a material in the UN Hazardous Materials Inventory, derived from the UN Model Regulations, to which an individual material, mixture or article is classified

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