

2.3. Other hazards

Substances contained in the mixture do not meet PBT and vPvB criteria in line with schedule 13th of the Regulation REACH.

SECTION 3: Composition/information on ingredients

Name	Content % mass	Identifying numbers of substances	Classification acc. to Regulation (EC) 1272/2008	Classification acc. to directive 67/548/EEC
Citric acid	<20	CAS: 5949-29-1 WE: 201-069-1 Index number: -	Eye Irrit. 2; H319	Xi; R36

The full wording of expressions describing hazard is given in sec. 16.

Numbers of appropriate registration: 01-2119457026-42-XXXX

SECTION 4: First aid measures.

4.1. Description of first aid measures

In case of exposure via respiratory tract

- Leave exposure area (or take the injured out of the exposure area).
- Assure peace and quiet to the injured as well as access to fresh air.
- Assure medical assistance if any worrying symptoms occur.

In case of exposure through contact with the skin

- Take off soiled clothing.
- Wash off with plenty of water and soap.
- Consult the doctor in case of skin irritation.

In case of exposure through contact with the eyes

- Remove contact lenses.
- Wash with plenty of cool water for about 15 minutes with the lids open (avoid strong water stream due to the risk of damaging the cornea mechanically)
- In case of any adverse symptoms consultation with an oculist is necessary.

In case of exposure via alimentary tract

- Rinse the mouth with water.
- Consult the doctor.

4.2. The most important acute and delayed symptoms and effects of exposure

Unknown.

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

Decision as to the rescue procedure shall be taken by the doctor after careful examination of the condition of the injured.

SECTION 5: Fire-fighting measures

Proceed in line with the Fire Safety Instruction, if the recipient does not have one, the surrounding persons shall be notified about the failure. All persons not participating in repairing the failure shall be removed from the area at risk. Evacuation shall be ordered if needed. Small fires shall be put out with extinguishers on hand, in case of big fires, State Fire Service and the Police shall be notified.

5.1. Extinguishing media

Product is non-flammable.

Appropriate extinguishing media: foams and extinguishing powders, carbon dioxide, water – dispersed water jets.

Inappropriate extinguishing media: compact water jets (creating the risk of spreading fire).

5.2. Special risks related to the mixture

Prevent the product, extinguishing media and water from getting to ground waters, potable water intakes and the sewage system. In the atmosphere of fire, carbon oxides and toxic fumes may form. Avoid inhaling combustion products.

5.3. Information for the fire services

The use of protective clothing with an independent breathing apparatus is recommended.

SECTION 6: Proceeding in the event of accidental release to the environment

6.1. Personal precautions, protective equipment and emergency procedures

For persons not belonging to the personnel giving assistance

Limit access of outsiders to the emergency area until appropriate cleaning procedures have been completed. Do not inhale vapours. Avoid contact with skin and eyes. Use personal protection means.

For persons giving assistance

Avoid contact with skin and eyes. Use protective gloves and clothing if there is a risk of exposure. **6.2.**

6.2. Precautions related to environment protection

Do not let the product get to the sewage system, ground or surface waters.

6.3. Methods and materials preventing the spread of contamination and aimed at removing contamination

- Protect drains.

- If possible, remove leakage (cut off liquid, place damaged packaging in a sealed protective container). In the event of a major leakage, the spot where liquid gathers shall be protected with an embankment, collected liquid shall be pumped out. Small volumes of spilled liquid shall be covered with a layer of non-flammable absorbing material (sand, soil), collected to a closed container and delivered for recycling or neutralization to competent units. Contaminated area shall be washed with water.

6.4. References to other sections

Personal protection means – section 8.

Waste shall be removed in line with the binding law provisions – section 13.

SECTION 7: Mixture handling and storage

7.1. Precautions for safe handling

During usage observe basic principles of hygiene of work with chemical products: do not eat or drink, avoid contact with the product, inhaling dust, contaminating eyes and skin. During breaks at work wash hands. Do not use clothing contaminated with the product. Observe the principles of personal hygiene.

7.2. Conditions of safe storage including information on any mutual nonconformities

Store in original appropriately marked and tightly closed packaging.

Additional information in Section 10.

7.3. Specific end uses

None.

SECTION 8: Exposure controls/personal protection means

8.1. Control parameters

Allowed concentration in working environment: no data for the product.

(Regulation of the Labour and Social Policy Minister of November 29th 2002 on the highest allowed concentrations and intensities of agents hazardous for the health in work environment, Journal of Laws 2002 No 217 item 1833 as amended).

Regulation of the Health Minister of February 2, 2011 on examining and measuring health hazardous agents in work environment (Journal of Laws 2011 No 33 item 166).

8.2. Exposure control

Applied technical protection measures

Information provided in section 7.

Personal protection measures:

Eyes or face protection: not required.

- hand protection: gloves made of: latex (thickness ca1 ± 0.1 mm breakthrough time ≥480 min), nitrile (thickness ≥ 0.11 mm; breakthrough time ≥480 min.), butyl (thickness ≥ 0.3 mm; breakthrough time

≥480 min.), fluorocautchouc (thickness ≥ 0.7 mm; breakthrough time ≥480 min.), chloroprene (thickness ≥ 0.6 mm; breakthrough time ≥480 min).

- other: not required.

Thermal risks: does not apply.

Environment exposure protection

Mixture shall not access ground waters, sewage or soil.

SECTION 9. Physical and chemical properties.

9.1. Information about general physical and chemical properties

- | | |
|--|---------------------------|
| • Form | transparent liquid |
| • Odour | none |
| • Odour threshold | no data |
| • pH | no data |
| • Melting/solidification point | no data |
| • Boiling temperature | ca. 100 ⁰ C |
| • Flash point | does not apply |
| • Evaporation rate | no data |
| • Flammability (of solid substance. gas) | does not apply |
| • Lower explosive/combustion limit | does not apply |
| • Upper explosive/combustion limit | does not apply |
| • Vapour pressure | no data |
| • Vapour density | no data |
| • Relative density | ca. 1.0 g/cm ³ |
| • Solubility in water | very good |
| • Self-ignition temperature | does not apply |
| • Decomposition temperature | no data |
| • Viscosity | |
| • Explosive properties | does not apply |
| • Oxidizing properties | no data |

9.2. Other information

No data.

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is not reactive under normal conditions.

10.2. Chemical stability

The product is stable under normal conditions.

10.3. Possibility of hazardous reactions

Unknown.

10.4. Conditions to avoid

High temperature.

10.5. Incompatible materials

Unknown.

10.6. Hazardous decomposition products

Do not occur under normal conditions. Products forming in fire are listed in section 5.

SECTION 11: Toxicological information.

11.1. Information on toxicological effects

Acute toxicity: no data for the product. Below data are stated for its ingredients:

Citric acid

LD50 (orally, rat)	11700 mg/kg
LD50 (orally, mouse)	5400 mg/kg
LD50 (skin, rat)	>2000 mg/kg
LD50 (rat, peritoneally)	725 mg/kg
LD50 (mouse, peritoneally)	940 mg/kg

Irritating effect: based on the data available, classification criteria are not met.

Caustic effect: based on the data available, classification criteria are not met.

Allergenic effect: based on the data available, classification criteria are not met.

Repeated dose toxicity: based on the data available, classification criteria are not met.

Carcinogenicity: based on the data available, classification criteria are not met.

Mutagenicity: based on the data available, classification criteria are not met.

Toxicity to reproduction: based on the data available, classification criteria are not met.

Information on likely routes of affecting

Swallowing: unknown.

Inhaling: unknown.

Skin exposure: unknown.

Eye exposure: unknown.

Symptoms related to physical, chemical and toxicological properties: no data.

Delayed, immediate and prolonged effects of short- and long-term exposure: unknown.

Other information: no data.

SECTION 12: Ecological information.

12.1. Toxicity:

Acute toxicity: no data for the product. Below data are stated for its ingredients:

Citric acid

Acute toxicity for:

- fish *Golden orfe* LC50 440 mg/l/48h
- fresh water invertebrates *Daphnia magna* LC50 1535 mg/l/24h
- algae *Scenedesmus quadricada* 428 mg/l/168h
- bacteria *Pseudomonas putida* >10000 mg/l/16h

12.2. Persistence and degradability

Easily biodegradable product.

Citric acid

Biodegradability: 97% after 28 days, 100% after 19 days.

12.3. Bio-accumulative potential

Bio-accumulation shall not be expected.

Citric acid

log Pow = -1.72

12.4. Mobility in soil

Product is water-soluble.

12.5. Results of PBT and vPvB assessment

The mixture's ingredients do not fulfil PBT and vPvB criteria.

12.6. Other adverse effects

Unknown.

SECTION 13: Disposal considerations.

13.1. Waste treatment methods

If possible, waste shall be recovered.

Do not allow the contamination of surface and ground waters. In line with the law regulation in force in Poland, waste may be collected, neutralized, recovered or recycled only by authorised companies, and it may be given only to such companies. In case of doubt, waste disposal procedures shall be discussed and agreed with the local Environment Protection Inspection unit.

Removal of mixture: Consider the possibility of putting to use.

Waste code: 08 04 10 Wastes from adhesives and sealants other than listed in 08 04 09.

Disposal of packaging: recycling or neutralization of packaging waste shall be done in line with the binding law regulations. Multi-use packaging shall be re-used after cleaning. Waste shall be neutralized in

professional authorised incinerating plants or waste neutralization plants. Clean packaging may be disposed of as ordinary packaging waste.

The following law regulations shall be observed:

The Act of 27 April 2001 on waste (Journal of Laws of 2001 no 62 item 628 as amended).

The Environment Minister Regulation of 27 September 2001 on waste catalogue (Journal of Laws of 2001 no 112, item 1206).

The Act of 11 May 2001 on packaging and Packaging waste (Journal of Laws of 2001 no 63, item 638 as amended).

SECTION 14: Transport information.

This product is not subject to regulations on the transport of dangerous goods by road.

SECTION 15: Regulatory information.

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

The Regulation of the Minister of Health of 21 December 2005 on essential requirements for individual protection measures (Journal of Laws of 2005 No. 259, item 2173).

The Act of 25 February 2011 on chemical substances and their mixtures (Journal of Laws of 2011 no. 63 item 322).

The Regulation of the Minister of Health of 20 April 2012 on labelling containers with hazardous substances, preparations and some chemical preparations (Journal of Laws of 2012 No. 0 item 445).

Directive 1999/45/EC of the European Parliament and Council of 31 May 1999 on harmonising the regulatory, executive and administrative provisions of Member States relating to the classification, labelling and packaging of hazardous substances and mixtures.

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

Regulation of the European Parliament and Council (EC) no. 1272/2008 of 16 December 2008 on the classification, labelling and packaging of hazardous substances and mixtures amending and repealing directives 67/548/EEC and 1999/45/EC and amending the directive (EC) no. 1907/2006 (Official Journal EU series L 353 of 31 December 2008 as amended).

Directive of the Committee (EC) no. 790/2009 of 10 August 2009 adjusting the Directive of the European Parliament and Council (EC) no. 1272/2008 of 16 December 2008 on the classification, labelling and packaging of substances and mixtures, to the technical-and-scientific progress.

Regulation of the Committee (EC) no. 453/2010 of 20 May 2010 amending the regulation No. 1906/2006 of the European Parliament and Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

European agreement on international transport of dangerous goods by road ADR (in force since January 1, 2005) (Journal of Laws of 2005, No. 178, item 1481).

The Act of 19 August 2011 on the transport of dangerous goods by road (Journal of Laws of 2011 no. 227, item 1367 as amended).

Regulation of European Chemicals Agency of 16 June 2014 (ECHA/PR/13/40) concerning substances of very high concern (SVHC)

15.2. Chemical safety assessment

The producer of the mixture did not provide the evaluation of chemical safety.

SECTION 16: Other information.

The explanation of abbreviations and acronyms used in the safety data sheet

PBT – Persistent, Bio-accumulative, Toxic.

vPvB – very Persistent and very Bio-accumulative.

Eye Irrit. 2 – Irritating effect to the eyes of category 2.

H319 – Irritating effect to the eyes.

Xi – Irritating product.

R36 – Irritating effect to the eyes.

LD50 - Lethal Dose 50% when you observe the death of 50% of the animals tested.

LC50 - Lethal Concentration 50% when you observe the death of 50% of the animals tested.

References to key literature and sources

Safety data sheet of the mixture's ingredients. Data base of the European Commission Joint Research Centre.

Legal regulations.

Recommendations with regard to employee trainings

Prior to commencement of work, the employee shall be trained from within the scope of Work Safety and Hygiene regarding the handling of chemicals and appropriate on the job training. Persons dealing with the transport of hazardous substances shall receive Work Safety and Hygiene training as well as the general on the job training.