

2.2. Signage elements

Signage in accordance with the Ordinance (WE) nr 1272/2008:



Pictograms:

Warning slogan: Danger

Phrases pointing out the type of danger:

H225 – Highly flammable liquid and steams.

H319 – Irritating to eyes.

H304 – If swallowed and inhaled, death may occur.

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

H361 – Suspected of damaging fertility or the unborn child.

H336 – May cause drowsiness or dizziness.

H412 - Harmful to aquatic organisms, with long-term effects.

Phrases pointing out the precautions:

P102 - Keep out of reach of children.

P210 - Keep away from heat sources, sparks, open flames. – No smoking

P261 - Avoid inhaling dust/smoke/gas/mist/vapor/spray.

P285 - Use personal airway protection in the event of inadequate ventilation.

P101 - Show the container or label if you need medical advice.

P403 + P235 - Store in a well-ventilated area. Store in a cool place.

P273 – Avoid release to the environment.

Other: Contains ethyl acetate, butyl acetate, distillates (C6-rich).

2.3. Other dangers

Mixture does not fulfil PBT or vPvB mixture criteria in accordance with the attachment XIII to the REACH ordinance.

SECTION 3: Content/information about ingredients

Name	% in the product	Substance iden. num.	Classification in accordance with the Ordinance (WE) 1272/2008
Ethyl acetate	<30	CAS: 141-78-6 WE: 205-500-4 Index number: 607-022-00-5	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336
Light naphtha-	<15	CAS: 64742-49-0	Flam. Liq. 2; H225

hydrogen treated (petroleum); Low boiling point hydrogen treated naphtha/ Low boiling point non-cyfluted naphtha. Distilates (petroleum), C6-rich		WE: 265-151-9 Index number: 649-328-00-1	Skin Irrit. 2; H315 Asp. Tox. 1; H304 Repr. 2; H361 STOT SE 3; H336 STOT RE 2; H373 Aquatic Chronic 2; H411
N-butyl acetate	<10	CAS: 123-86-4 WE: 204-658-1 Index number: 607-025-00-1	Flam. Liq. 3; H226 STOT SE 3; H336

See the full text of phrases pointing out the danger in the section 16.

Registration numbers:

Light naphtha- hydrogen treated (petroleum) 01-2119475133-43-XXXX.

Butyl acetate 01-2119485493-29-XXXX.

Other registration numbers are not available.

SECTION 4: First aid

4.1. First aid description

Inhalation:

- leave the exposure area (or bring the victim out of the exposure area)
- provide the victim with calm and fresh air
- give oxygen in case of dyspnoea
- if breathing is stopped, use artificial respiration
- provide medical help

Skin contact:

- remove contaminated clothes
- Wash skin with water and soap
- consult with a doctor in case of skin irritation

Eye contact:

- remove contact lenses
- do not use neutralizing agents
- wash eyes with plenty of cool water for approximately 15 minutes with lids open (avoid strong water jet due to the risk of mechanical damage to the cornea)
- in case of ailment, an ophthalmic consultation is required_

Digestive system:

- do not induce vomiting because of aspiration to the lungs
- if natural vomiting develops hold the victim in a forward-facing position
- provide medical assistance immediately.

4.2. The most important severe and delayed symptoms

Nausea, pain and dizziness, dry and cracked skin, eyes irritation.

4.3. Recommendations referring to any immediate health care and special conduct with an injured one.

The decision about rescue conduct should be taken by a doctor after precise assessment of injured one's state.

SECTION 5: Conduct in case of fire

Proceed in accordance with the existing Fire Safety Instruction, if the recipient does not have one, the environment should be informed about the failure. Remove from the danger area all persons who are not involved in the liquidation of the failure. If necessary, order evacuation. Extinguish small fires with handheld extinguishing agents, in the case of large fires, call the Fire Service and the State Police.

5.1. Extinction measures

Appropriate extinction measures

Foam, carbon dioxide, extinguishing powders, water- scattered stream

Inappropriate extinction measures:

Tight-knit streams of water

Small fire: extinguish with carbon dioxide, extinguishing powders and foam.

Big fire: Cool the tanks exposed to fire or high temperature with water from a safe distance; if possible, remove them from the area of danger (explosion danger).

5.2. Special dangers related to the substance

Product is highly flammable. Prevent leakage, extinguishing agents and extinguishing water from entering ground water. Combustion products may contain carbon oxides. Avoid breathing combustion products.

5.3. Information for Fire Brigade

Wear gas-tight protective clothing and breathing apparatus independent of the ambient air.

SECTION 6: Conduct in case of unintended release to the environment

6.1. Individual precautions, protective equipment and procedure in emergency cases

For people not from the emergency staff:

Restrict the accessibility of every incidental person to the endangered area up to the time of finishing every cleaning operation. In case of big release, isolate the endangered area. Don't inhale steams. Avoid skin and eye contact. Follow individual precautions.

For emergency staff:

Protect the containers against overheating due to the risk of explosion. Announce an absolute ban on smoking and the use of sparking tools. Remove sources of ignition. Use protective gloves and protective clothing in case of prolonged exposure and large release. Provide increased ventilation in the room in which the unintentional release occurs.

6.2. Precautions in range of the environmental protection

Prevent the product from entering drains, ground water and surface water.

6.3. Methods and materials that prevent pollution spreading and serve for its removal

- Secure the drains.
- If possible, eliminate leaks (seal, place damaged packaging in a tight protective packaging). In the event of a large leak, embank the place where the liquid has accumulated, and pump out the collected liquid. Cover small amounts of spilled liquid with non-flammable absorbent material (sand, earth, vermiculite). Collect in a closed container and hand over for recovery or neutralization to appropriate entities.

6.4. References to other sections

Individual precautions – section 8.

Remove in accordance to the section 13.

SECTION 7: Conduct with substances/materials and their storage

7.1. Precautions referring to safe conduct

When using, follow the basic rules of hygiene of working with chemical products: do not eat nor drink, avoid contact with the product and inhalation of vapours. Wash hands during breaks at work. Do not use clothes contaminated with the product. Follow the rules of personal hygiene. Work clothes should be made of natural materials.

Use effective ventilation to prevent the concentration of dangerous agents from exceeding the limit values established above (see section 8) and to avoid the concentration of explosive solvent vapours in the air. There is a total ban on smoking and the use of open flames. Do not use sparking tools.

7.2. Conditions of safe storage, including all information referring to any mutual incompatibility

Store in original, properly labelled, tightly closed containers in a warehouse, in dry, cool, shaded and well-ventilated places, away from sources of heat and ignition, at a temperature of +5 to + 300C. Keep away from children. Shelf life is 6 months from the production date.

Additional information in the section 10.

7.3. Special final applications

Lack.

SECTION 8: Exposure control/individual precautions

8.1. Parameters referring to the control

Permissible concentrations in the work environment. No data for the product. Data for its components are given below.

(Regulation of the Minister of Labour and Social Policy of November 29, 2002 on the highest permissible concentrations and intensities of factors harmful to health in the work environment, Journal of Laws 2002, 217, item. 1833 as amended changes).

<u>Name</u>	<u>NDS [mg/m³]</u>	<u>NDSch [mg/m³]</u>	<u>NDSP [mg/m³]</u>
Ethyl acetate	200	600	-

n-hexane	72	-	-
Hexane acyclic isomers saturated except n-hexane	400	1200	-
Butyl acetate	200	950	-

Hexane and its isomers are composed of a low boiling fraction treated with hydrogen.

Recommended monitoring procedure

PN-Z-04119-01:1978 Air purity protection - Tests for the content of acetic acid esters - Determination of methyl, ethyl, propyl, butyl and amyl acetates at workplaces by gas chromatography with sample enrichment.

PN-Z-04136-3:2003 Air purity protection. Hexane content tests. Determination of n-hexane at work stations by gas chromatography.

Health Minister's Ordinance from 2nd of February 2011 about examinations and measurements of factors harmful to health in work environment (Dz. U. Nr 33, position 166, 2011).

DNEL

Low boiling point hydrogen treated naphtha

	<i>worker</i>	<i>consumer</i>
Inhalation, chronic toxicity	93 mg/m ³	20 mg/m ³
Skin, chronic toxicity	13 mg/kg body mass per day	7 mg/kg body mass per day
Orally, chronic toxicity	-	6 mg/kg body mass per day

DNEL

Butyl acetate

	<i>worker</i>	<i>consumer</i>
Inhalation, long term exposure	48 mg/m ³	12 mg/m ³
Skin, long term exposure	7 mg/kg body mass per day	3,4 mg/kg body mass per day
Orally, chronic toxicity	-	3,4 mg/kg body mass per day

PNEC

Butyl acetate

Fresh water	0,18 mg/l
Sea water	0,018 mg/l
Periodic release	0,36 mg/l
Sludge- fresh water	0,981 mg/kg
Sludge- sea water	0,0981 mg/l

Soil	0,0903 mg/kg
Biological sewage treatment plant	35,6 mg/l

8.2. Exposure control

Applicable technical control measures

Information is given in the section 7_

Individual precautions:

Eye / face protection: protective goggles.

- hand protection: protective gloves resistant to organic solvents (e.g. butyl rubber, breakthrough time \geq 30 min. glove thickness approx. 0.3 mm).

- other: protective, non-sparking clothing.

Respiratory protection: masks with an organic vapor absorber (type AX). Thermal hazards: not applicable.

Environmental exposure controls: The mixture should not be allowed to get into groundwater, sewage or soil.

SECTION 9. Physical and chemical attributes

9.1. Information about basic physical and chemical attributes

- Appearance light brown liquid
- Smell characteristic
- Smell threshold lack of data
- pH not applicable
- Melting/solidification temperature:
 - Ethyl acetate - 84°C
 - Low boiling point hydrogen treated naphtha <-20°C
 - Butyl acetate <183,15K (<-90°C) in 1013 hPa
- Boiling temperature
 - Ethyl acetate 78°C
 - Low boiling point hydrogen treated naphtha 64 - 95°C
 - Butyl acetate 399,15K (126°C) in 1013 hPa
- Ignition temperature <0°C
- Evaporation rate lack of data
- Flammability(solids, gas) not applicable
- Lower flammability limit
 - Ethyl acetate 2,1% V
 - Low boiling point hydrogen treated naphtha 1,2% V
 - Butyl acetate 1,2% V
- Upper flammability limit
 - Ethyl acetate 11,5% V

Low boiling point hydrogen treated naphtha	8,3% V
Butyl acetate	15,0% V
• Vapour pressure	
Ethyl acetate	100 hPa (20°C)
Low boiling point hydrogen treated naphtha	approx. 43 kPa in
40°C	
Butyl acetate	15 hPa in 20°C
• Vapour density	
Low boiling point hydrogen treated naphtha	2,97 (air = 1)
Butyl acetate	4,0 (air = 1)
• Relative density	approx. 0,9 g/cm ³
• Solubility in organic solvents	not soluble in water; soluble in organic solvents
• Division ratio: n-octanol-water	lack of data
• Self-ignition temperature	
Ethyl acetate	460°C
Low boiling point hydrogen treated naphtha	>223°C
Butyl acetate	688,15K (415°C)
• Decay temperature	lack of data
• Viscosity	>30 s, ISO cup 3 mm (ISO 2431)
• Explosive attributes	not applicable
• Oxidizing attributes	lack of data

9.2. Other information

Lack of data.

SECTION 10: Stability and reactivity

10.1. Reactivity

Product is not reactive in normal conditions.

10.2. Chemical stability

Product is stable in normal conditions.

10.3. Possibility of dangerous reactions occurrence

Unknown.

10.4. Conditions that should be avoided

High temperature, open flame, ignition sources, electric spark.

10.5. Incompatible materials

Strong oxidants.

10.6. Dangerous decay products

In normal conditions they do not occur.

SECTION 11: Toxicological information

11.1. Information about toxicological results

Acute toxicity: lack of data for the product; data for its ingredients is given below:

Ethyl acetate

LD50 (rabbit, orally) 4935 mg/kg LC50

(rat, inhalation) 1600 mg/m³/4h LD50

(rat, skin) 5000 mg/kg

Low boiling point hydrogen treated naphtha

substance of low toxicity

LD50 (orally, rat) > 16750 mg/kg

LC50 (inhalation, rat) > 259354 mg/m³/ 4h

LD50 (skin, rabbit) > 3350 mg/kg

Butyl acetate

LD50 (rat, orally) 10760 mg/kg LC50

(rat, inhalation) 23,4 mg/l/4h LD50

(rabbit, skin) >14000 mg/kg

Irritating/corrosive effect: Eye irritant.

Corrosive effect: Based on accessible data, criteria aren't fulfilled.

Sensitization: Based on accessible data, criteria aren't fulfilled.

Toxicity for a double dose: Lack of data.

Carcinogenicity: Based on accessible data, criteria aren't fulfilled.

Mutagenicity: Based on accessible data, criteria aren't fulfilled.

Reproductive toxicity: Possible risk of impaired fertility.

Information about possible exposure ways

Consumption: irritation of the mucous membrane of the pharynx, oesophagus and stomach, abdominal pain, headaches and dizziness, nausea, vomiting. Other symptoms as in inhalation toxicity.

Inhalation: the product is harmful by inhalation. Steam can cause drowsiness and dizziness. This product irritates the respiratory tract, may cause headaches and dizziness, nausea, dementia, weakness.

Skin contact: repeated exposure may cause skin dryness or cracking, pain, reddening.

Eye contact: spray of product can cause eye irritation, conjunctivitis.

Results related to physical, chemical and toxicological attributes: lack of data.

Delayed, direct and drown-out result of long/short term exposure: harmful by inhalation and poses a serious risk to health as a result of long term exposure.

Results of mutual reaction: lack of data.

Other information: lack of data.

SECTION 12: Ecological information

12.1. Toxicity

Lack of data for the product; data for its ingredients is given below: Ethyl acetate

Toxicity for:

- fish *Pimephales promelas* LC50 2300 mg/l/96h
- crustaceans *Daphnia cucullata* EC50 164 mg/l/48h, *Daphnia magna* NOEC 12 mg/l/21d
- algae *Scenedesmus subspicatus* EC50 >900 mg/l/72h
- bacteria *Pseudomonas putida* EC50 650mg/l/16h

Low boiling point hydrogen treated naphtha

Acute toxicity for:

- fresh water invertebrates *Pseudokirchnerella subcapitata* EC50 9,902 mg/l/72h
- fresh water fish *Oncorhynchus mykiss* LC50 13,37 mg/l/96h

Cronic toxicity for:

- invertebrates *Daphnia magna* NOEL 5,224 mg/l/21dni
- fish *Oncorhynchus mykiss* NOEL 2,992 mg/l/28dni

Butyl acetate

Acute toxicity for:

- fish *Pimephales promelas* LC50 18 mg/l/96h
- invertebrates *Daphnia sp.* EC50 44 mg/l/48h
- seaweed *Desmodesmus subspicatus* NOEC 200 mg/l/72h; ErC50 648 mg/l/72h
- activated sludge organisms *Tetrahymena pyriformis* IC50 356 mg/l/40 h

12.2. Durability and decay ability

Lack of data for the product; data for its ingredients is given below:

Ethyl acetate

The product is easily biodegradable in aerobic systems with the use of salt water or water modifiers. Biodegradation of 100% of the TOD after 28 days (municipal sludge).

Low boiling point hydrogen treated naphtha

Biotic: Biodegradability: readily biodegradable 81% after 28 days Activated sludge simulation test - not applicable (UVCB substance)

Abiotic: No hydrolysis as pH puncture and photolysis / phototransformation occur.

Butyl acetate

Abiotic degradation: n-Butyl acetate slowly hydrolyses on contact with water. Half-life of hydrolysis is 78 days at pH = 8 and 2 years at pH = 7 (25 ° C). The tests confirmed the ability of n-butyl acetate to photolyze in air in the presence of OH⁻.

Biotic decomposition: The available research results indicate that n-butyl acetate is an easily biodegradable substance. The degree of biodegradation is 80% after 5 days, 83% after 28 days.

12.3. Bioaccumulation ability

Lack of data for the product; data for its ingredients is given below:

ethyl acetate

The substance has a low bioaccumulation potential.

Low boiling point hydrogen treated naphtha

Not applicable- UVCB substance.

butyl acetate

N-butyl acetate does not show potential for bioaccumulation.

log Kow = 2,3 predicted BCF= 15,3

12.4. Mobility in soil

Lack of data for the product; data for its ingredients is given below:

Low boiling point hydrogen treated naphtha

Not applicable- UVCB substance.

n-butyl acetate

predicted log Koc = 1,27.

12.5. PTB and vPvB attributes assessment results

Product doesn't fulfil PBT criteria.

12.6. Other harmful results of action

Harmful to aquatic organisms; may cause long-lasting unfavourable changes in the aquatic environment.

SECTION 13: Conduct with waste

13.1. Methods of waste disposal

If possible, recover the waste.

Avoid contamination of surface and ground water Pursuant to the law in force in Poland, waste collection, neutralization, recovery or recycling may be carried out by plants with appropriate permissions, and only to such plants there may be transferred the waste. In case of doubts, the manner of waste handling should be agreed with the local unit of the Environmental Protection Inspection.

Mixture removal: Consider re-using.

Waste code: 08 04 09* waste adhesives and sealants containing organic solvents or other dangerous substances.

Packaging removal: Recycling or neutralization of packaging waste should be carried out in accordance with applicable regulations. Reusable packaging, after cleaning, can be re-used. Carry out neutralization of waste in professional, authorized incineration plants or in waste treatment and neutralization wayer. Packaging after cleaning is treated like a normal waste.

Waste code: 15 01 10* – Packaging containing or contaminated with residues of dangerous substances.

Legal basis:

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

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

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

SECTION 14: Information referring to transport

The product is subject to the regulations governing the carriage of dangerous goods.

Road transport

14.1. UN number	1133
14.2. Appropriate UN transport name	ADHESIVES CONTAINING FLAMMABLE LIQUIDS
14.3. Danger class(es) in transport	3
14.4. Packaging group	II
14.5. Dangers for environment	unknown
14.6. Special precautions for users	when handling loads, use protective equipment in accordance with section 8. Protect from sources of ignition, electrical spark, open flame, high temperature.
14.7. Loose transport in accordance with the attachment II of MARPOL 73/78 convention and IBC codex	lack of data.

SECTION 15: Information on legal regulations.

15.1. Legal information on safety, health and environmental requirements specific to the substance or mixture

Regulation of the Minister of Health of December 21, 2005 on the essential requirements for personal protective equipment (Journal of Laws of 2005, No. 259, item 2173).

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

Regulation of the Minister of Health of April 20, 2012 on labelling the packaging of hazardous substances and mixtures and some mixtures (Journal of Laws of 2012 No. 0 item 445).

DIRECTIVE 1999/45 / EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 31 May 1999 on the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations.

Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of December 18, 2006 on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) as amended d.

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 L 353 series of December 31, 2008 as amended).

Commission Regulation (EC) No 790/2009 of 10 August 2009 adapting to scientific and technical progress Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on the classification, labelling and packaging of substances and mixtures.

Commission Regulation (EU) No. 453/2010 of May 20, 2010 amending Regulation (EC) No. 1907/2006 of the European Parliament and the Council on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH).

Regulation of the European Chemicals Agency of June 16, 2014 (ECHA / PR / 13/40) on SVHC substances.

European Agreement concerning the international carriage of dangerous goods by road ADR (effective from 01/01/2005) (Journal of Laws of 2005, No. 178, item 1481)

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

Act of April 16, 2004 on construction products (Journal of Laws of 2004, No. 92, item 881). Regulation of the Minister of Infrastructure of 11 August 2004 on conformity assessment systems, requirements to be met by notified bodies participating in the conformity assessment, and the method of marking construction products with CE marking (Journal of Laws 2004 No. 195 item 2011).

Regulation of the Minister of Health of 11 June 2012 on the category of hazardous substances and mixtures, the packaging of which is equipped with closures that hinder opening by children and a tactile warning of danger (Journal of Laws of 2012, No. 0, item 688).

COMMISSION REGULATION (EU) 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 (REACH).

Judgment of the Court of 10 September 2015 regarding SVHC substances. Regulation (EC) No 1907/2006 (REACH Regulation) - Article 7 par. 2 and art. 33.

15.2. Chemical safety assessment

Supplier hasn't carried out chemical safety assessment.

SECTION 16: Other information

Update

Section 2.

Explanation of abbreviation and acronyms used in this MSDS:

PBT - a persistent, bio-accumulative and toxic substance

vPvB - a substance that is very persistent and bio-accumulating to a great extent

Flam. Liq. 2 - Flammable liquid, category 2

H225 - Highly flammable liquid and vapor

Eye Irrit. 2 - Irritating effect to eyes

H319 - Irritating effect to eyes

STOT SE 3 - Specific target organ toxicity - single exposure STOT of category 3

H336 - May cause drowsiness or dizziness

Skin Irrit. 2 - Skin irritation, category 2

H315 - Causes skin irritation

Asp. Tox. 1 - Aspiration toxicity

H304 - May be fatal if swallowed and enters airways

Repr. 2 - Reproductive toxicity of category 2

H361 - Suspected of damaging fertility or the unborn child

STOT RE 2 - Specific target organ toxicity - repeated exposure STOT category 2

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

Aquatic Chronic 2 - dangerous to the aquatic environment, category 2

H411 - Toxic to aquatic life with long lasting effects.

Flam. Liq. 3 - Flammable liquid, category 3

H226 - Easy flammable liquid and steams.

NDS - Maximum Allowable Concentration

STEL - Maximum Permissible Momentary Concentration

NDSP - Maximum Allowable Ceiling Concentration DN (M) EL - No effect level
PNEC - Predicted No Effect Concentration
LD50 - Dose at which 50% of test animals are observed dying
LC50 - Concentration at which 50% of test animals are died
EC50 - Concentration at which a 50% reduction in growth or rate of growth is observed
NOEC - Highest concentration of a substance at which no effects are observed
NOEL - The level at which no harmful changes are observed.
ErC50 - has the same meaning as EC50 under conditions of reduced growth level
IC50 - concentration causing medial inhibition
TOD - Theoretical Oxygen Demand
UVCB - Substances of unknown or variable composition, complex reaction products or biological materials
Log Kow - log octanol-water partition coefficient. BCF - Bioconcentration factor
Log Koc - the logarithm of the adsorption coefficient corrected for soil organic carbon

References to key literature and data sources

Material Safety Data Sheets of the mixture ingredients. Database of the European Commission Joint Research Centre. Regulations.

Training courses

Before starting a work with the product, user should get to know all the rules: about Safety and Hygiene at work with chemicals, especially there should be conducted a training position People working with the transport of dangerous materials should be trained in safety, they should also undergo general training on the job.