MATERIAL SAFETY DATA SHEET			
		Edition:	I
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Name:	**BUTAPREN/TOTAL BUTAPREM ADHESIVE**		

Section 1: Identification of the substance/preparation and of the company/undertaking.

1. 1. Product identifier

Trade name: **BUTAPREN/TOTAL BUTAPREM ADHESIVE**
Article number: Butapren adhesive
UFI RH50-AOX4-Q00D-5R13

1. 2. Application:

Recommended use: Intended for cold bonding of natural and synthetic leather (e.g. belts, handbags, saddles), natural and synthetic fabrics, rubber and felts. May be used for shoe bonding.
Other recommended uses: None
Uses advised against: Any other than those listed above
Hazardous components: Reaction mass of ethylbenzene and xylene, acetone, C_6–C_7 hydrocarbons, alkanes, isoalkanes, cyclic hydrocarbons, >5% n-hexane. Contains 2,6-di-tert-butyl-p-cresol.

1.3. Product distributor details

Name: BORCHEM
Address: Ul. Rokicińska 144, 92-412 Łódź
Phone: +48 698 783 781
e-mail: biuro@borchem.pl
Emergency phone number in case of hazard: + 48 223988029

Section 2: Hazards identification.

1. Classification of the substance or mixture according to Regulation (EC) No. 1272/2008

1.1. Classification related to physico-chemical properties:

GHS 02

Flam Liq 2 – Flammable liquid mixture. Hazard Class 2.
H 225 – Highly flammable liquid and vapour.

1.2. Classification related to effects on the human body

GHS 08
Repr 2 – Toxic for reproduction. Hazard category 2.
H 361 – Suspected of damaging fertility or the unborn child.
STOT RE 2 – Specific target organ toxicity – repeated exposure. Hazard category 2.
H 373 – May cause damage to organs through prolonged or repeated exposure

GHS 07
Skin Irrit 2 – Skin corrosion/irritation. Hazard category 2.
H 315 – Causes skin irritation.
Eye Irrit 2 – Serious eye damage/eye irritation. Hazard category 2.
H 319 – Causes serious eye irritation.
STOT SE 3 – Specific target organ toxicity – single exposure. Hazard category 3.
Respiratory tract irritation.
H 335 – May cause respiratory irritation.
STOT SE 3 – Specific target organ toxicity – single exposure. Hazard category 3.
Narcosis.
H 336 – May cause drowsiness or dizziness.

1.3. Classification related to environmental hazards.
Aquatic Chronic 3 – Hazardous to the aquatic environment – chronic. Hazard category 3

H 412 – Harmful to aquatic life with long lasting effects.

2.2. Label elements.

Hazard pictograms and signal words.

GHS 02, GHS 08, GHS 07
Keyword: DANGER

Hazard statements.
H 225 Highly flammable liquid and vapour.
H 315 – Causes skin irritation.
H 319 – Irritating to eyes.
H 361 – Suspected of damaging fertility or the unborn child.
H 335 – May cause respiratory irritation.
H 336 – May cause drowsiness or dizziness.
H 373 – May cause damage to organs through prolonged or repeated exposure.
H 412 – Harmful to aquatic life with long lasting effects.

Precautionary statements.
P 102 – Keep out of the reach of children.
P 210 – Keep away from heat sources, hot surfaces, sources of sparks, open flames and other ignition sources. Do not smoke.
P 280 – Wear protective gloves, protective clothing, eye protection, face protection.
P 304+P 340 – IF INHALED: remove person to fresh air and keep comfortable for breathing.
P 305 + P 351+ P 338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
P 501 – Dispose of contents/container in accordance with established waste management principles.

2.3. Other hazards

The components of the mixture do not meet PBT or vPvB criteria according to Annex XIII to the REACH Regulation. The 2,6-di-tert-butyl-p-cresol contained in the product is considered to be an endocrine disruptor. Testing results and evaluation of endocrine effects are under development as part of SEV. Product vapors may form explosive mixtures with air.

Section 3. Composition/Information on ingredients.

3.1 Substances
Not applicable.
3.2 Mixture
Mixture of organic solvents with additives.
Hazardous components:
Reaction mass of ethylbenzene and xylene **contents 25–35 %**

CAS:	None (mixture)
EC:	905-588-0
Index number:	None (mixture)
Registration no.:	01-2119488216-32-0028

Classification related to physico-chemical properties:

Flam. Liq. 3 H 226
Classification related to effects on the human body:

Asp Tox 1 H 304, STOT RE 2 H 373

Acute Tox. 4 H 332, Skin Irrit 2 H 315, Eye Irrt 2 H 319, STOT SE 3 H 335

Classification related to environmental hazards:
Not classified
Specific concentration limits:
Not applicable
M Factor:
Not applicable
Acute toxicity estimate (ATE)

LC50 (inhalation)	27,124 mg/m³
LD50 rat (oral)	3,523 mg/kg
LD50 rabbit (dermal)	>4,200 mg/kg

Particle characteristics that specify the nanoform:
Not applicable.

Acetone content 10–17%

CAS:	67-64-1
EC:	200-662-2
Index number:	606-001-00-8
Registration no.:	01-2119471330-49-XXXX

Classification related to physico-chemical properties:

Flam. Liq. 2 H 225
Classification related to effects on the human body:

Eye Irrt 2 H 319, STOT SE 3 H 336
Classification related to environmental hazards:
Not classified
Specific concentration limits:
Not applicable
M Factor:
Not applicable
Acute toxicity estimate (ATE)

LC50 rat (inhalation)	7,600 mg/m³
LD50 rat (oral)	5,800 mg/kg
LD50 rabbit, guinea pig (dermal)	7,400 mg/kg

Particle characteristics that specify the nanoform:
Not applicable.

Ethyl acetate contents 10–17%

CAS:	141-78-6
EC:	205-500-4
Index number:	607-022-00-5
Registration no.:	01-2119475103-46-XXXX

Classification related to physico-chemical properties:

Flam. Liq. 2 H 225
Classification related to effects on the human body:

Eye Irrt 2 H 319, STOT SE 3 H 336
Classification related to environmental hazards:
Not classified
Specific concentration limits:
Not applicable
M Factor:
Not applicable
Acute toxicity estimate (ATE)

LC50 mouse (inhalation)	>26 mg/dm³
LD50 rat (oral)	>5,620 mg/kg
LD50 rabbit (dermal)	>18,000 mg/kg bw/24h

Particle characteristics that specify the nanoform:
Not applicable.

C₆–C₇ hydrocarbons – n-alkanes, isoalkanes, cyclic hydrocarbons, >5% n-hexane content 10–13%

CAS:	None (mixture)
EC:	924-168-8
Index number:	None (mixture)
Registration no.:	01-2119475133-43-0011

Classification related to physico-chemical properties:

Flam. Liq.2 H 225

Classification related to effects on the human body:

Asp Tox 1 H 304, STOT RE 2 H 373, Repr 2 H 361

Skin Irrit 2 H 315, STOT SE 3 H 336

Classification related to environmental hazards

Aquatic Chronic 2 H 411

UVCB – Content of identified ingredients:

Benzene CAS 71-43-2,	EC 200-753-7	<=0.01 %
Toluene CAS 108-88-3,	EC 203-625-9	<0.01 %
n-Hexane CAS 110-54-3,	EC 203-777-6	6–60 %
Cyclohexane CAS 110-82-7,	EC 203-806-2	2–11 %

Specific concentration limits:
Not applicable
M Factor:
Not applicable
Acute toxicity estimate (ATE)

LC50 rat (inhalation)	>25,200 mg/m³/4h
LD50 rat (oral)	>5,840 mg/kg
LD50 rabbit (dermal)	>2,920 mg/kg

Particle characteristics that specify the nanoform:
Not applicable.

Ethylbenzene contents 5–10%

CAS:	100-41-4
EC:	202-849-4
Index number:	601-023-00-4
Registration no.:	01-2119489370-35-XXXX

Classification related to physico-chemical properties:

Flam. Liq. 2 H 225

Classification related to effects on the human body:

Asp Tox 1 H 304, STOT RE 2 H 373

Acute Tox. 4 H 332,

Classification related to environmental hazards:	**Not classified**
Specific concentration limits:	Not applicable
M Factor:	**Not applicable**

Acute toxicity estimate (ATE)

LC50 (inhalation)	17,400 mg/m³
LD50 (oral)	17,800 mg/kg
LD50 (dermal)	3500 mg/kg

Particle characteristics that specify the nanoform:
Not applicable.

2,6-di-tert-butyl-p-cresol content <1%

CAS:	128-37-0
EC:	204-881-4
Index number:	None
Registration no.:	None

Classification related to physico-chemical properties:
Not classified.
Classification related to effects on the human body:
Not classified.
Classification related to environmental hazards

Aquatic Acute 1 H 400, Aquatic Chronic 1 H 410
Specific concentration limits:
Not applicable
M Factor:
Not applicable
Acute toxicity estimate (ATE)

LD50 rat (oral)	>2,000 mg/kg
LD50 rat (dermal)	>2,000 mg/kg

Particle characteristics that specify the nanoform:
Not applicable.
The full wording of the H-phrases is included in section 16 of the data sheet.

Section 4. First-aid measures

4. 1. Description of first aid measures.

General guidelines:
In case of poisoning or suspected poisoning, provide professional medical assistance for the victim.
Inhalation poisoning:
If the victim is conscious, they should be taken outside and if unconscious, they should be removed from the exposure zone, kept calm, protected against heat loss.
Oral poisoning:
Do not induce vomiting. Risk of aspiration of product into the lungs. Rinse mouth with water. Never give anything to an unconscious person. In case of spontaneous vomiting, do not allow aspiration of vomit into the respiratory tract**.** Contact a doctor immediately and show the package or label.
Eye contamination:
If the victim has contact lenses, remove them. Immediately rinse contaminated eyes with a continuous stream of clean water for at least 15 minutes. While rinsing, keep the eyelids wide open and move the eyeball. Provide consultation with an ophthalmologist.
Skin contamination:
Take off contaminated clothing. Wash contaminated skin thoroughly with soap and water until symptoms of irritation subside. Do not use solvents or diluents to wash the skin. If irritation does not subside, apply a sterile dressing on the affected area and consult a doctor.

4.2 Most important symptoms and effects, both acute and delayed

Skin contact: irritation and redness. Repeated exposure may cause skin dryness, peeling and cracking.
Eye contact: redness, lacrimation, pain, temporary irritation.
Ingestion: abdominal pain, feeling sick, nausea, vomiting, diarrhea, impaired coordination; if vomiting occurs, there is a risk of aspiration of the product into the lungs and chemical pneumonia, possibly death in extreme cases.
Inhalation: may cause irritation of the mucous membranes of the eyes and respiratory tract, lacrimation, redness of the conjunctiva, coughing, burning sensation in the throat and nose, headaches and dizziness, product vapors may have an intoxicating effect.

4.3 Indication of any immediate medical attention and special treatment needed

Emergency treatment is to be decided by a physician, upon careful examination of the victim. Treat symptomatically. Do not give anything by mouth to an unconscious person and do not induce vomiting.

Section 5. Firefighting measures.

5. 1. Extinguishing media:

Appropriate:

Carbon dioxide (CO_2 fire extinguisher), dry-chemical fire extinguisher, sand. Larger fires should be extinguished with a stream of alcohol-resistant foam.

Extinguishing media unsuitable for safety reasons:

Water jet - risk of spreading the fire.

5.2. Special hazards arising from the substance or mixture

Highly flammable product.

Combustion produces harmful gases containing, among others, carbon monoxide and carbon dioxide and other unidentified thermal decomposition products. Avoid inhaling the products of combustion, as they may pose a health hazard. Possibility of smoke accumulation in premises. Vapors may form explosive mixtures with air. The vapors are heavier than air and will accumulate in the lower parts of rooms and depressions.

Notify the immediate vicinity about the fire, remove all persons not involved in extinguishing the fire from the danger area, call firefighting units if necessary.

5.3 Advice for firefighters

General protective measures typical in case of a fire. Do not stay in a fire risk zone without the proper chemical-resistant clothing and a closed-circuit breathing apparatus. Flammable. Product vapors may form explosive mixtures with air. The vapors are heavier than air and will accumulate in the lower parts of rooms and depressions.

Heated containers build up pressure and can explode.

Cool containers exposed to the fire with water from a safe distance. Collect used fire extinguishing agents, do not allow them to enter groundwater, surface water or the sewage system.

Section 6. Accidental release measures.

6.1. Personal precautions and emergency procedures.

Notify the immediate vicinity of the malfunction.

Make sure all the people who are not removing the malfunction leave the hazardous area. Turn off electrical equipment (danger of sparking and explosion risk).

Remove ignition sources, extinguish open flames, do not use sparking equipment, eliminate hot surfaces and other heat sources.

Prevent further evaporation of the substance by framing the spill site or covering the liquid surface with an insulating agent.

The released liquid will easily evaporate. If released indoors, provide effective ventilation/airing.

Highly flammable liquid. Explosion risk area. Vapors form explosive mixtures with air. Vapors are heavier than air and may spread along the floor/ground to distant sources of ignition and create a flashback hazard.

Protective measures for workers involved in malfunction removal:

Protective gloves, protective clothing made of materials resistant to organic solvents, use respiratory isolation equipment when exposed to vapors or aerosol.

6.2. Environmental precautions.

Wash the contaminated area with plenty of water. Do not allow the product to enter the sewage system/surface water or groundwater.

6.3. Methods and material for containment and cleaning up.

Collect the released product with a liquid absorbing material (sand, diatomaceous earth, acid absorber, universal absorbent, sawdust). Secure the collected waste in a lockable waste container.
Dispose of in accordance with applicable regulations.
Do not pour over with water or an aqueous cleanser solution.

6.4. Reference to other sections:

For handling of substances and mixtures, refer to section 7.
For worker protection measures, refer to section 8.
For waste handling, refer to section 13.

Section 7. Handling and storage.

7.1 Precautions for safe handling.

Work in accordance with health and safety rules. Avoid contact with eyes and skin. Do not inhale product vapors. Wash your hands before taking a break and after finishing work. Keep containers tightly closed when not in use. Ensure proper ventilation of the room where the product is stored and used. Remove ignition sources, do not smoke. Prevent electrostatic discharge. Do not use sparking tools.
Use personal protective equipment.

7.2 Conditions for safe storage, including any incompatibilities.

Store in tightly closed original packaging in a cool, dry and well-ventilated room. Do not store together with food and animal feed. Protect from moisture. Protect from direct sunlight. Avoid open flames and heat sources. Use non-sparking tools, prevent electrostatic discharge. Do not store together with incompatible materials (see subsection 10.5).

7.3 Specific end use(s).

No information on uses other than those listed in subsection 1.2.

7.4. General protective and hygienic measures:

Adhere to the usual precautions for handling chemicals.
Observe basic hygiene rules: do not eat or drink at the workstation; wash hands with soap and water every time after work; do not use contaminated protective clothing. Immediately remove any clothing contaminated with the product. Any amount of spilled product should be removed immediately.

Section 8. Exposure controls/personal protection.

8.1. Control parameters:

Hygiene standards:

Reaction mass of ethylbenzene and xylene: [EC 905-588-0]

MAC	none
MAC(STEL)	none
MAC(C)	none

Components of the reaction mixture:

Xylene, mixture of isomers	[CAS 1330-20-7]
MAC	100 mg/m³
MAC(STEL)	200 mg/m³
Dermal absorption.	
Ethylbenzene	[CAS 100-41-4]
MAC	200 mg/m³
MAC(STEL)	400 mg/m³
Dermal absorption.	

BLV

Xylene – BLV of methylhippuric acid in urine – 1.4 g/L based on the average urine specific gravity of 1.024 g/cm3**.**
Ethylbenzene – BLV of mandelic acid in urine 20 mg/h

Acetone	**[CAS 67-64-1]**
MAC	600 mg/m³
MAC(STEL)	1800 mg/m³

MAC(C) none
TWA 8H 1,210 mg/m³
Ethyl acetate [CAS 141-78-6]
MAC 734 mg/m³
MAC(STEL) 1,468 mg/m³
MAC(C) none
C_6–C_7 hydrocarbons – n-alkanes, isoalkanes, cyclic hydrocarbons, >5% n-hexane [EC 924-168-8]. Petroleum naphtha:
MAC 500 mg/m³
MAC(STEL) 1,500 mg/m³
MAC(C) none
Components of the hydrocarbon mixture
Benzene
MAC 1.6 mg/m³
MAC(STEL) none
MAC(C) none
Dermal absorption.
Toluene
MAC 100 mg/m³
MAC(STEL) 200 mg/m³
MAC(C) none
n-Hexane
MAC 40 mg/m³
MAC(STEL) 80 mg/m³
MAC(C) none
Cyclohexane
MAC 300 mg/m³
MAC(STEL) 1,000 mg/m³
MAC(C) none
Dermal absorption.
2,6-di-tert-butyl-p-cresol
MAC none
MAC(STEL) none
MAC(C) none
TWA (8h) 2 mg/m³

Maximum admissible concentrations: in accordance with the Regulation of the Minister of the Family and Social Policy of 12 June 2018, Polish Journal of Laws of 2018, item 1286) as amended. Labeling a substance with the "skin" notation means that substance absorption through the skin can be as significant as with inhalation exposure.

Reaction mass of ethylbenzene and xylene
DNEL

	Oral		Inhalation		Skin contact	
	Short-term exposure	Long-term exposure	Short-term exposure	Long-term exposure	Short-term exposure	Long-term exposure
Employee			442 mg/m³	212 mg/m³		221 mg/kg
Consumer		12.5 mg/kg bw/24h		442 mg/m³		125 mg/kg bw/24h

PNEC
Freshwater 0.327 mg/dm³
Seawater 0.327 mg/dm³
Sediment freshwater 12.46 mg/kg
Sediment seawater 12.46 mg/kg
Soil: 2.31 mg/kg
Wastewater treatment plant 6.58 mg/dm³
Acetone

DNEL

	Oral		Inhalation		Skin contact	
	Short-term exposure	Long-term exposure	Short-term exposure	Long-term exposure	Short-term exposure	Long-term exposure
Employee			2,420 mg/m³	1,210 mg/m³		186 mg/kg
Consumer		62 mg/kg bw/24h		200 mg/m³ (20 ºC)		62 mg/kg bw/24h

PNEC

Freshwater	10.6 mg/dm³
Seawater	10.6 mg/dm³
Sediment freshwater	30.4 mg/kg
Sediment seawater	30.4 mg/kg
Soil:	29.5 mg/kg
Wastewater treatment plant	100 mg/dm³

Ethyl acetate

DNEL

	Oral		Inhalation		Skin contact	
	Short-term exposure	Long-term exposure	Short-term exposure	Long-term exposure	Short-term exposure	Long-term exposure
Employee			Systemic effects 1,468 mg/m³. Local effects 1,468 mg/m³.	Systemic effects 734 mg/m³. Local effects 734 mg/m³.		Systemic effects 63 mg/kg bw/24h
Consumer		Systemic effects 4.5 mg/kg bw/24h	Local effects 734 mg/m³. Systemic effects 734 mg/m³	Systemic effects 367 mg/m³. Local effects 367 mg/m³.		Systemic effects 37 mg/kg bw/24h

PNEC

Freshwater	0.26 mg/dm³
Seawater	no data
Sediment freshwater	1.25 mg/kg
Sediment seawater	no data
Soil:	0.24 mg/kg
Wastewater treatment plant	650 mg/dm³

C_6–C_7 hydrocarbons – n-alkanes, isoalkanes, cyclic hydrocarbons, >5% n-hexane

DNEL

	Oral		Inhalation		Skin contact	
	Short-term exposure	Long-term exposure	Short-term exposure	Long-term exposure	Short-term exposure	Long-term exposure
Employee				145 mg/m³		21 mg/kg/24h
Consumer		8 mg/kg bw/24h		27 mg/m³		9 mg/kg bw/24h

PNEC

No data available

Ethylbenze

ne
DNEL

	Oral		Inhalation		Skin contact	
	Short-term exposure	Long-term exposure	Short-term exposure	Long-term exposure	Short-term exposure	Long-term exposure
Employee			Systemic effects 442 mg/m³. Local effects 884 mg/m³.	Systemic effects 442 mg/m³. Local effects 884 mg/m³.		
Consumer						

PNEC

Freshwater	0.1 mg/dm³
Seawater	0.1 mg/dm³
Sediment freshwater	no data
Sediment seawater	no data
Soil:	no data
Wastewater treatment plant	no data

2,6-di-tert-butyl-p-cresol
DMEL 2 mg/m³
DNEL

	Oral		Inhalation		Skin contact	
	Short-term exposure	Long-term exposure	Short-term exposure	Long-term exposure	Short-term exposure	Long-term exposure
Employee				5.8 mg/m3		8.3 mg/kg/24h
Consumer				1.74 mg/m³		5 mg/kg bw/24h

PNEC

Freshwater	0.004 mg/dm³
Seawater	0.0004 mg/dm³
Sediment freshwater	1.29 mg/kg
Sediment seawater	1.29 mg/kg
Soil:	1.04 mg/kg
Wastewater treatment plant	100 mg/dm³

Recommendations for monitoring hazardous substance concentration levels in the air – measurement methods:

- Regulation of the Minister of Health of 2 February 2011 on research and measurements of factors harmful to health at a workplace (Journal of Laws of 2011, No. 33, item 166)
- PN-89/Z-01001/06. Air purity protection. Names, definitions and units. Terminology concerning air quality tests at work places.
- PN Z-04008-7:2002. Air purity protection. Collecting samples. Principles of collecting air samples in work environment and the interpretation of results.
- PN-EN-689:2002. Workplace atmospheres – guidance for the assessment of exposure to chemical agents for comparison with limit values and measurement strategy.

Note: When the substance concentration is known, personal protection should be selected taking into account the substance concentration at the workplace, exposure time and the activities performed by the employee.
In an emergency, if the substance concentration at the workplace is not known, use personal protection equipment of the highest recommended protection class.
The employer shall ensure that the personal protective equipment, clothing and shoes used have the appropriate protective and practical properties and shall ensure their proper cleaning, maintenance, repair and decontamination.
Recommended initial and periodical testing of employees should be carried out in accordance with the provisions of the Regulation of the Minister of Health and Social Welfare of 30 May 1996 on medical examinations of employees, scope of preventive health care and medical certificates issued for the purposes provided for in the Labor Cod (Polish Journal of Laws no. 69/1996, item 332, as amended; Polish Journal of Laws no. 37/2001, item 451).

8.2 Exposure controls

Follow the general health and safety guidelines. Do not eat, drink or smoke tobacco during work. Wash hands thoroughly before taking a break and after finishing work. Avoid contact with eyes and skin. General and/or local ventilation must be provided in the workplace to maintain the concentration of harmful agents below the established limit values. Eye washers should be installed near workstations if there is a danger of eye contamination or if there is a danger of a worker's clothing catching fire.

Protection of hands: use solvent-resistant protective gloves.

In case of short-term contact, use protective gloves with an effectiveness level of 2 or higher (breakthrough time >30 minutes). In case of prolonged contact, use protective gloves with an effectiveness level of 6 (breakthrough time >480 minutes). Recommended glove material: nitrile rubber or other material that provides a sufficient level of protection.

When using protective gloves in contact with chemical products, it should be borne in mind that the stated levels of effectiveness and the corresponding breakthrough times do not refer to the actual protection time at a given workstation, as this is affected by many factors, such as temperature, exposure to other substances, etc. It is recommended to replace gloves immediately if there are any signs of wear, damage or changes in appearance (color, elasticity, shape). Follow the manufacturer's instructions not only as regards using gloves, but also for cleaning, maintenance and storage. It is also important to remove the gloves properly, so as to avoid contaminating the hands.

Skin protection: use antistatic protective clothing.

Eye protection: use sealed safety goggles if a risk assessment indicates this is necessary.

Respiratory protection: not required under normal working conditions. In case of vapor and aerosol formation, use absorbing or absorbing-filtering equipment of the appropriate protective class (Class 1/protection against vapors with a volume concentration in air not exceeding 0.1%; Class 2/ protection against vapors with air concentration not exceeding 0.5%; Class 3/ protection against vapors with a volume concentration in air up to 1%). Isolation equipment must be used in cases where oxygen concentration is ≤19% and/or the maximum concentration of the toxic substance in the air is ≥1.0% by volume.

The personal protective equipment applied must fulfil the requirements of the Regulation of the Minister of the Economy of 21 December 2005 (Polish Journal of Laws No. 259, item 2173) and Regulation 2016/425/EU (as amended). The employer should provide personal protective equipment adequate to the activities performed and fulfilling all quality requirements, as well as ensure their maintenance and cleaning.

8.3. Environmental exposure controls

Avoid discharge into the environment, do not introduce into the sewage system. Possible emissions from ventilation systems and processing equipment.

Do not allow to soak into the soil. Do not discharge to surface water and sewers.

Section 9. Physical and chemical properties.

9.1 Information on basic physical and chemical properties

state of aggregation:	liquid
color:	milky-yellow
odor:	characteristic
odor threshold:	no data
pH-value:	no data
melting point/freezing point:	not determined
initial boiling point and boiling range:	>35 ºC
flash point:	<23 ºC
evaporation rate:	no data
flammability (solid, gas):	not applicable
upper/lower explosive limit:	for the whole mixture: not determined
for the mixture of ethylbenzene and xylene:	explosion limits: lower 1% V/V, upper 7.1% V/V,
for the mixture of acetone and ethyl acetate:	explosion limits: lower 2.1 V/V, upper 14.3% V/V
vapour pressure:	no data
vapor density:	not determined

density at 20 °C:	0.865 ±0.015 g/cm³
solubility:	soluble in organic solvents
partition coefficient:	n-octanol/water: not applicable (mixture)
autoignition temperature:	>200 ºC
decomposition temperature:	no data
particle characteristics:	not applicable
kinetic viscosity:	20.5 nm²/s at 40 ºC

9.2 Other information
None

Section 10. Stability and reactivity.

10.10.1 Reactivity
The product is not reactive under the described storage and handling conditions.

10.2 Chemical stability
The product is stable if used and stored appropriately.

10.3 Possibility of hazardous reactions
Vapors may form explosive mixtures with air.

10.4 Conditions to avoid
Avoid open flame, static electricity sparks, hot surfaces, other ignition sources and high temperatures.

10.5 Incompatible materials
Alkalis, strong oxidizers, concentrated sulfuric and nitric acids and their mixtures. The product may soften or dissolve some plastics.

10.6 Hazardous decomposition products
The product will not decompose if stored as recommended. Carbon monoxide and carbon dioxide are formed during combustion.

Section 11. Toxicological information.

11.1. Information on toxicological effects
11.1.1 Acute toxicity

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

ATE mix (skin - calculated value)	3,675 mg/kg body weight
ATE mix (inhalation - calculated value)	29.4 mg/dm³

Reaction mass of ethylbenzene and xylene

Acute toxicity estimate (ATE)

LC50 (inhalation)	27,124 mg/m³
LD50 rat (oral)	3,523 mg/kg
LD50 (dermal toxicity, rabbit)	>4,200 mg/kg

Acetone

Acute toxicity estimate (ATE)

LC50 (inhalation, rat)	7,600 mg/m³
LD50 rat (oral)	5,800 mg/kg
LD50 rabbit, guinea pig (dermal)	7,400 mg/kg

Ethyl acetate

Acute toxicity estimate (ATE)

LC50 mouse (inhalation)	>26mg/dm³
LD50 rat (oral)	>5,620 mg/kg
LD50 (dermal toxicity, rabbit)	>18,000 mg/kg bw/24h

C_6–C_7 hydrocarbons – n-alkanes, isoalkanes, cyclic hydrocarbons, >5% n-hexane

Acute toxicity estimate (ATE)

LC50 (inhalation, rat)	>25,200 mg/m³/4h
LD50 rat (oral)	>5,840 mg/kg
LD50 (dermal toxicity, rabbit)	>2,920 mg/kg

Ethylbenzene

Acute toxicity estimate (ATE)

LC50 (inhalation, rat)	17,400 mg/m³

LD50 rat (oral)	3500 mg/kg
LD50 rabbit (dermal)	17,800 mg/kg

2,6-di-tert-butyl-p-cresol

Acute toxicity estimate (ATE)

LD50 rat (oral)	>2,000 mg/kg
LD50 rat (dermal)	>2,000 mg/kg

11.1.2. Skin corrosion/irritation
Causes skin irritation (Category 2)
11.1.3. Serious eye damage/irritation
Causes eye irritation. (Category 2)
11.1.4. Respiratory or skin sensitisation
Based on the data available, the classification criteria are not met.
11.1.5. Germ cell mutagenicity
Based on the data available, the classification criteria are not met.
11.1.6. Carcinogenicity
Based on the data available, the classification criteria are not met.
11.1.7. Reproductive toxicity
Suspected of damaging fertility or the unborn child (Category 2)
11.1.8. Specific target organ toxicity - single exposure
May cause respiratory irritation. (category 3)
May cause drowsiness or dizziness (category 3)
11.1.9. Specific target organ toxicity – repeated exposure
May cause damage to organs through prolonged or repeated exposure – damage to hearing organs (Category 2)
11.1.10. Aspiration hazard
Based on the data available, the classification criteria are not met.

11.1.2. Information on likely routes of absorption:
The substances contained in the product can be absorbed into the body through the respiratory tract, intact skin and, if swallowed, through the gastrointestinal tract. In case of some of the solvents in the adhesive (acetone, ethyl acetates), dermal absorption can be as significant as inhalation exposure.

11.1.3. Symptoms related to the physical, chemical and toxicological characteristics:
Skin contact: irritation and redness. Repeated exposure may cause skin dryness, peeling and cracking.
Eye contact: redness, lacrimation, pain, temporary irritation.
Ingestion: abdominal pain, feeling sick, nausea, vomiting, diarrhea, impaired coordination; if vomiting occurs, there is a risk of aspiration of the product into the lungs and chemical pneumonia, possibly death in extreme cases.
Inhalation: may cause irritation of the mucous membranes of the eyes and respiratory tract, lacrimation, redness of the conjunctiva, coughing, burning sensation in the throat and nose, headaches and dizziness, product vapors **may have an intoxicating effect.**

11.2. Information on other hazards:
Information on adverse health effects caused by endocrine disrupting properties:
The 2,6-di-tert-butyl-p-cresol contained in the product is considered to be an endocrine disruptor. Testing results and evaluation of endocrine effects are under development as part of SEV.

Section 12. Ecological information:

12.1 Toxicity
Reaction mass of ethylbenzene and xylene

LC50: acute toxicity	freshwater fish	*Oncorhynchus mykiss*	2.6 mg/dm³/96h
EC50: acute toxicity	algae	*Pseudokirchneriella subcapitata*	2.2 mg/dm³/72h
EC50: acute toxicity	activated sludge	>157 mg/dm³/73h	

Acetone

NOEC: chronic toxicity	invertebrates	*Daphnia magna*	2212 mg/dm³/28 days
LC50: toxicity	earthworm	100–1000 µg/cm²/48h	
LC50: acute toxicity	freshwater fish	*Oncorhynchus mykiss*	5540 mg/dm³/96h

LC50: acute toxicity	saltwater fish	*Alburnus alburnus*	1100 mg/dm³/96h
LC50: acute toxicity	freshwater invertebrates	*Daphnia pulex*	8800 mg/dm³/48h
LC50: acute toxicity	saltwater invertebrates	*Artemia salina*	2100 mg/dm³/24h
LOEC: acute toxicity	freshwater algae	*Microcystis aeruginosa*	530 mg/dm³/8 days
NOEC: acute toxicity	saltwater algae	*Prorocentrum minimum*	430 mg/dm³/96h.

Ethyl acetate

EC50: acute toxicity	algae	*Selenastum capricornutum*	1,800–3,200 mg/dm³/7h
EC50: toxicity	algae	4300 mg/dm³/24h	
LC50: acute toxicity	fish	*Pimephales promelas*	220–250 mg/dm³/96h
LC50: acute toxicity	fish	*Oncorhynchus mykiss*	350–600 mg/dm³/96h
EC50: acute toxicity	aquatic invertebrates	*Daphnia magna*	560 mg/dm³/48h

C_6–C_7 hydrocarbons – n-alkanes, isoalkanes, cyclic hydrocarbons, >5% n-hexane

LD50: acute toxicity	fish	*Oncorhynchus mykiss*	11.4 mg/dm³/96h
EL50: chronic toxicity	fish	*Oncorhynchus mykiss*	2.028 mg/dm³/21 days
EC50: acute toxicity	freshwater invertebrates	*Daphnia magna*	3–22 mg/dm³/48h
NOEC: chronic toxicity	freshwater invertebrates	*Daphnia magna*	0.17 mg/dm³/21 days
EL50: acute toxicity	aquatic microorganisms	*Tetrahymena pyriformis*	35.29 mg/dm³/48h

Ethylbenzene

No data available

2,6-di-tert-butyl-p-cresol

NOEC: chronic toxicity	green algae	ECOSAR estimate	0363 mg/dm³
NOEC: chronic toxicity	fish	ECOSAR estimate	0.041 mg/dm³
NOEC: chronic toxicity	invertebrates	ECOSAR estimate	0.061 mg/dm³
NOEC: chronic toxicity	fish	measured	0.053 mg/dm³
LC50: acute toxicity	green algae	ECOSAR estimate	0.577 mg/dm³
LC50: acute toxicity	invertebrates	ECOSAR estimate	0.386 mg/dm³
LC50: acute toxicity	invertebrates	measured	0.84 mg/dm³
LC50: acute toxicity	fish	ECOSAR estimate	0.464 mg/dm³

12.2 Persistence and degradability

Reaction mass of ethylbenzene and xylene

The substance is expected to be degraded by indirect photolysis in air. Easily biodegradable

Acetone

Biotic degradation. Easily biodegradable

Biodegradability at 28 days (according to OECD 301B) is 90.0 ± 2.2%. Abiotic degradation

Hydrolysis as a function of pH.

Acetone is resistant to hydrolysis – no degradation in soil.

Identification of photolytic degradation products: carbon monoxide and dioxide, methanol, formaldehyde.

Photolysis: 18.6–114.4 days.

Ethyl acetate

Chemical oxygen demand (gO2/g) = 1.540

Biochemical oxygen demand (BOD) at 25 days = 1.43 gO2/g

Biochemical oxygen demand (BOD) at 20 days = 1.240 gO2/g

Biochemical oxygen demand (BOD) at 5 days = 1.245 gO2/g

C_6–C_7 hydrocarbons – n-alkanes, isoalkanes, cyclic hydrocarbons, >5% n-hexane

The substance is stable under normal environmental conditions, as well as at the expected temperature and pressure during storage and handling.

Ethylbenzene

No data.

2,6-di-tert-butyl-p-cresol

Hydrolysis:

2,6-Di-tert-butyl-p-cresol is a poorly water-soluble solid substance. It contains functional groups with a weak potential for dissociation. Based on the dissociation constant data and assuming poor solubility, the substance cannot interact significantly in water under normal environmental conditions.

Biodegradation:

Non-biodegradable.

12.3 Bioaccumulative potential **Reaction mass of ethylbenzene and xylene**
Bioconcentration factor (BCF) = 25.9
n-Octanol/water partition coefficient Log Kow = 3.2
Bioaccumulation is not expected.
Acetone
Bioconcentration factor (BCF) = 15.3 (calculated value)
Ethyl acetate
Bioaccumulation coefficient Log Kow = 0.68–0.72
Does not accumulate in living organisms.
C_6–C_7 hydrocarbons – n-alkanes, isoalkanes, cyclic hydrocarbons, >5% n-hexane
Not applicable – UVCB substance
Ethylbenzene
No data available
2,6-di-tert-butyl-p-cresol
It is not considered to be rapidly degradable in the environment.
The predicted Log Kow and BCF/BAF values suggest that it probably has some potential for bioconcentration and bioaccumulation.

12.4 Mobility in soil
Reaction mass of ethylbenzene and xylene
Ability to adsorb soil and sediment
Acetone
May penetrate into the soil and may be transported through groundwater. Absorption/desorption test – sorption – soil Kd at (20ºC) = 1.5 L/kg
Ethyl acetate
Substance evaporates rapidly. Floats on water. Is not expected to be absorbed in the soil.
C_6–C_7 hydrocarbons – n-alkanes, isoalkanes, cyclic hydrocarbons, >5% n-hexane
Not applicable – UVCB substance
Ethylbenzene
No data available
2,6-di-tert-butyl-p-cresol
Slow release from water surface is anticipated. TD (river) 10.48 days
TD (lake) 122.8 days
Reacts with hydroxyl radicals in air.
Has some potential in soil and sediment Log Ko/c – 3.91–4.17.

12.5 Results of PBT and vPvB assessment
The substances contained in the product are not assessed as PBT and vPvB.

12.6. Endocrine disruptive properties
Information on adverse environmental effects caused by endocrine disrupting properties:
2,6-di-tert-butyl-p-cresol
Testing results and environmental impact assessment for the substance are under development as part of SEV.

12.7. Other adverse effects
Information concerning adverse environmental effects caused by endocrine disrupting properties – under development.

Section 13. Disposal considerations.
13.1. Waste treatment methods

Recommendations for the mixture: do not introduce into the sewage system. Dispose of according to the applicable regulations.

Waste code 08 04 09* – Waste adhesives and sealants containing organic solvents or other hazardous substances.

Recommendations for used packaging: recycling or disposal of packaging waste shall be carried out in accordance with the applicable regulations. Only packaging that is completely empty can be recycled.

Waste code 15 01 02 – Plastic packaging.

Waste code 15 01 10* – Packaging containing or contaminated with hazardous substances.

EU legal acts: directives of the European Parliament and the Council: 2008/98/EC, as amended, and 94/62/EC, as amended.

National legislation: Waste Act of 14 December 2012 (Polish Journal of Laws of 2013, item 21 as amended; Consolidated text (Polish Journal of Laws of 2018, item 992, 1000). Act of 13 June 2013 on packaging and packaging waste management (Polish Journal of Laws of 2013, item 888, as amended).

Section 14. Transport information

14.1 UN Number

UN 1133

14.2 UN proper shipping name

ADHESIVES CONTAINING FLAMMABLE MATERIALS.

14.3 Transport hazard class(es)

3,F1

14.4 Packing group

II

14.5 Environmental hazards

The product is not classified as hazardous to the environment according to transportation regulations.

14.6 Special precautions for user

Remove ignition sources. Use appropriate personal protective equipment according to section 8 of this sheet.

Section 15. Regulatory information.

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

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

Regulation of the Minister of Labor and Social Policy of 12 June 2018 on maximum admissible concentration levels of noxious substances in the workplace (Polish Journal of Laws of 2018, item 1286, as amended).

Waste Act of 14 December 2012 (Polish Journal of Laws of 2013, item 21, as amended).

Act of 13 June 2013 on packaging and packaging waste management (Polish Journal of Laws of 2013, item 888, as amended).

Regulation of the Minister of the Environment of 9 December 2014 on waste catalog (Polish Journal of Laws 2014, item 1923). Regulation of the Minister of the Economy of 21 December 2005 on the essential requirements for personal protective equipment (Journal of Laws No. 259, item 2173).

Regulation of the Minister of Health of 2 February 2011 on research and measurements of factors harmful to health at a workplace (Polish Journal of Laws of No. 33, item 166).

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

1907/2006/EC Regulation concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) and 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 Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, as amended.

1272/2008/EC Regulation 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, as amended.

2015/830/EU	Commission Regulation of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH).
2008/98/EC	Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives, as amended
94/62/EC	Directive of the European Parliament and of the Council of 20 December 1994 on packaging and packaging waste, as amended.
2016/425/EU	Regulation of the European Parliament and of the Council of 9 March 2016 on personal protective equipment and repealing Council Directive 89/686/EEC.

15.2 Chemical safety assessment

A safety assessment for the mixture is not required.

Section 16. Other information.

The information presented above is based on our best knowledge and relate to the product in the form in which it is applied. Data concerning this product is presented in order to satisfy safety requirements and not in order to guarantee any special product properties.

Should the conditions of use of the product be outside the control of the manufacturer, the liability for the safe use of the product, shall remain with the user.

The employer is obliged to inform all employees who have contact with the product about the risks and safety measures specified in this material safety data sheet.

This material safety data sheet was drafted based on the sheet supplied by the manufacturer and/or online databases and the applicable regulations on hazardous substances and chemical preparations.

Full wording of acronyms and H-phrases in section 3 of the data sheet

Flam Liq 2 – Flammable liquid substance. Hazard Class 2.
H 225 – Highly flammable liquid and vapour.
Flam Liq 3 – Flammable liquid substance. Hazard Class 3.
H 226 – Flammable liquid and vapor.
Asp. Tox. 1 – Aspiration hazard of hazard category 1.
H 304 – May be fatal if swallowed and enters airways.
Acute Tox. 4 – Acute toxicity (following inhalation exposure). Hazard category 4.
H 332 – Harmful if inhaled.
Skin Irrit 2 – Skin corrosion/irritation. Hazard category 2.
H 315 – Causes skin irritation.
Eye Irrit. 2 – Serious eye damage/irritation. Hazard category 2.
H 319 – Irritating to eyes.
STOT SE 3 – Specific target organ toxicity – single exposure. Hazard category 3. Respiratory tract irritation.
H 335 – May cause respiratory irritation.
STOT SE 3 – Specific target organ toxicity – single exposure. Hazard category 3. Narcosis.
H 336 – May cause drowsiness or dizziness.
STOT RE 2 – Specific target organ toxicity – repeated exposure. Hazard category 2.
H 373 – May cause damage to organs through prolonged or repeated exposure.
Repr 2 – Toxic for reproduction. Hazard category 2.
H 361 – Suspected of damaging fertility or the unborn child.
Aquatic Acute 1 – Environmental hazard, acute toxicity. Hazard category 1.
H 400 – Very toxic to aquatic life.
Aquatic Chronic 1 – Environmental hazard, chronic toxicity. Hazard category 1.
H 410 – Very toxic to aquatic life with long lasting effects
Aquatic Chronic 2 – Environmental hazard, chronic toxicity. Hazard category 2.
H 411 – Toxic to aquatic life with long lasting effects.

Key to abbreviations and acronyms

MAC	Maximum admissible concentration (national)
MAC(STEL)	Maximum admissible short-term concentration Concentration (national)
MAC(C)	Maximum admissible ceiling concentration (national)
DSB	Admissible concentration in biological material(national)

PBT	Persistent, bioaccumulative and toxic substance.
vPvB	Very persistent and very accumulative.
PNEC	Predicted no-effect concentration.
DNEL	Derived no effect level.
UVCB	Substances of unknown or variable composition.

Training

Before starting work with the product, the user should review the occupational health and safety rules for handling chemicals, as well as receive appropriate job training. Persons involved in the transportation of hazardous materials under the ADR agreement should be properly trained in their duties (general training, job training and safety training).

References to key literature and data sources

This sheet was drafted based on the safety data sheet provided by the manufacturer, literature data, Internet databases, as well as own knowledge and experience, taking into account the current legislation.

Further information

Classification based on physical and chemical parameters testing, as well as data on the content of hazardous components obtained using the calculation method based on the guidelines of Regulation 1272/2008/EC (CLP).