



**UTWARDZACZ DO LAKIERU BEZBARWNEGO UHS 4:1 - HARDENER
FOR CLEARCOAT UHS 4:1**

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier: UTWARDZACZ DO LAKIERU BEZBARWNEGO UHS 4:1 - HARDENER FOR CLEARCOAT UHS 4:1

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

Relevant uses: Standard hardener for UHS 4:1 clearcoat.

Uses advised against: All uses not specified in this section or in section 7.3

1.3 Details of the supplier of the safety data sheet:

Agencja Handlowa "BOLL" Wojciech Dalewski Spółka Jawna
ul. Chemiczna 3
65-713 Zielona Góra - Polska
Phone.: 68 451 99 99 - Fax: 68 451 99 00
technolog@boll.pl

1.4 Emergency telephone number:

SECTION 2: HAZARDS IDENTIFICATION **

2.1 Classification of the substance or mixture:

CLP Regulation (EC) No 1272/2008:

Classification of this product has been carried out in accordance with CLP Regulation (EC) No 1272/2008.

Acute Tox. 4: Acute inhalation toxicity, Category 4, H332

Eye Irrit. 2: Eye irritation, Category 2, H319

Flam. Liq. 3: Flammable liquids, Category 3, H226

Skin Irrit. 2: Skin irritation, Category 2, H315

Skin Sens. 1: Sensitisation, skin, Category 1, H317

STOT SE 3: Respiratory tract toxicity, single exposure, Category 3, H335

2.2 Label elements:

CLP Regulation (EC) No 1272/2008:

Warning



Hazard statements:

H226 - Flammable liquid and vapour

H315 - Causes skin irritation

H317 - May cause an allergic skin reaction

H319 - Causes serious eye irritation

H332 - Harmful if inhaled

H335 - May cause respiratory irritation

Precautionary statements:

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

P260: Do not breathe dust/fume/gas/mist/vapours/spray

P280: Wear protective gloves/protective clothing/eye protection/face protection

P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P501: Dispose of contents/container in accordance with regulations on hazardous waste or packaging and packaging waste respectively

Supplementary information:

EUH204: Contains isocyanates. May produce an allergic reaction

2.3 Other hazards:

Product fails to meet PBT/vPvB criteria

** Changes with regards to the previous version

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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS **

3.1 Substance:

Non-applicable

3.2 Mixture:

Chemical description: a mixture of organic and auxiliary substances

Components:

In accordance with Annex II of Regulation (EC) No 1907/2006 (point 3), the product contains:

Identification	Chemical name/Classification	Concentration
CAS: 28182-81-2 EC: 931-274-8 Index: Non-applicable REACH: 01-2119485796-17-XXXX	Hexamethylene diisocyanate, oligomers⁽¹⁾ Self-classified	45 - <55 %
	Regulation 1272/2008 Acute Tox. 4: H332; Skin Sens. 1: H317; STOT SE 3: H335 - Warning	
CAS: 123-86-4 EC: 204-658-1 Index: 607-025-00-1 REACH: 01-2119485493-29-XXXX	N-butyl acetate⁽¹⁾ ATP CLP00	15 - <25 %
	Regulation 1272/2008 Flam. Liq. 3: H226; STOT SE 3: H336; EUH066 - Warning	
CAS: 108-65-6 EC: 203-603-9 Index: 607-195-00-7 REACH: 01-2119475791-29-XXXX	2-methoxy-1-methylethyl acetate⁽¹⁾ ATP ATP01	<12 %
	Regulation 1272/2008 Flam. Liq. 3: H226 - Warning	
CAS: 97-85-8 EC: 202-612-5 Index: Non-applicable REACH: 01-2120766277-44-XXXX	Isobutyl isobutyrate⁽¹⁾ Self-classified	<10 %
	Regulation 1272/2008 Flam. Liq. 3: H226 - Warning	
CAS: 763-69-9 EC: 212-112-9 Index: Non-applicable REACH: 01-2119463267-34-XXXX	Ethyl-3-ethoxypropionate⁽¹⁾ Self-classified	<6 %
	Regulation 1272/2008 Flam. Liq. 3: H226 - Warning	
CAS: 1330-20-7 EC: 215-535-7 Index: 601-022-00-9 REACH: 01-2119488216-32-XXXX	Xylene⁽¹⁾ ATP CLP00	<5 %
	Regulation 1272/2008 Acute Tox. 4: H312+H332; Flam. Liq. 3: H226; Skin Irrit. 2: H315 - Warning	

⁽¹⁾ Voluntarily-listed substance failing to meet any of the criteria set out in Regulation (EU) No. 2015/830

To obtain more information on the hazards of the substances consult sections 8, 11, 12, 15 and 16.

** Changes with regards to the previous version

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures:

The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the SDS of this product.

By inhalation:

Remove the person affected from the area of exposure, provide with fresh air and keep at rest. In serious cases such as cardiorespiratory failure, artificial resuscitation techniques will be necessary (mouth to mouth resuscitation, cardiac massage, oxygen supply, etc.) requiring immediate medical assistance.

By skin contact:

Remove contaminated clothing and footwear, rinse skin or shower the person affected if appropriate with plenty of cold water and neutral soap. In serious cases see a doctor. If the product causes burns or freezing, clothing should not be removed as this could worsen the injury caused if it is stuck to the skin. If blisters form on the skin, these should never be burst as this will increase the risk of infection.

By eye contact:

Rinse eyes thoroughly with water for at least 15 minutes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, in which case removal could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS for the product.

By ingestion/aspiration:

Do not induce vomiting, but if it does happen keep the head down to avoid aspiration. Keep the person affected at rest. Rinse out the mouth and throat, as they may have been affected during ingestion.

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

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SECTION 4: FIRST AID MEASURES (continued)

Acute and delayed effects are indicated in sections 2 and 11.

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

Non-applicable

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media:

If possible use polyvalent powder fire extinguishers (ABC powder), alternatively use foam or carbon dioxide extinguishers (CO₂). IT IS RECOMMENDED NOT to use full jet water as an extinguishing agent.

5.2 Special hazards arising from the substance or mixture:

As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

5.3 Advice for firefighters:

Depending on the magnitude of the fire it may be necessary to use full protective clothing and self-contained breathing apparatus (SCBA). Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...) in accordance with Directive 89/654/EC.

Additional provisions:

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Eliminate all sources of ignition. In case of fire, cool the storage containers and tanks for products susceptible to combustion, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

Isolate leaks provided that there is no additional risk for the people performing this task. Evacuate the area and keep out those without protection. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Above all prevent the formation of any vapour-air flammable mixtures, through either ventilation or the use of an inert medium. Destroy any source of ignition. Eliminate electrostatic charges by interconnecting all the conductive surfaces on which static electricity could form, and also ensuring that all surfaces are connected to the ground.

6.2 Environmental precautions:

This product is not classified as hazardous to the environment. Keep product away from drains, surface and underground water.

6.3 Methods and material for containment and cleaning up:

It is recommended:

Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13.

6.4 Reference to other sections:

See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:

A.- Precautions for safe manipulation

Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

B.- Technical recommendations for the prevention of fires and explosions

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SECTION 7: HANDLING AND STORAGE (continued)

Transfer in well ventilated areas, preferably through localized extraction. Fully control sources of ignition (mobile phones, sparks,...) and ventilate during cleaning operations. Avoid the existence of dangerous atmospheres inside containers, applying inertization systems where possible. Transfer at a slow speed to avoid the creation of electrostatic charges. Against the possibility of electrostatic charges: ensure a perfect equipotential connection, always use groundings, do not wear work clothes made of acrylic fibres, preferably wearing cotton clothing and conductive footwear. Comply with the essential security requirements for equipment and systems defined in Directive 94/9/EC (ATEX 100) and with the minimum requirements for protecting the security and health of workers under the selection criteria of Directive 1999/92/EC (ATEX 137). Consult section 10 for conditions and materials that should be avoided.

C.- Technical recommendations to prevent ergonomic and toxicological risks

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

D.- Technical recommendations to prevent environmental risks

It is recommended to have absorbent material available at close proximity to the product (See subsection 6.3)

7.2 Conditions for safe storage, including any incompatibilities:

A.- Technical measures for storage

Minimum Temp.: 5 °C
Maximum Temp.: 25 °C
Maximum time: 9 Months

B.- General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

7.3 Specific end use(s):

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters:

Substances whose occupational exposure limits have to be monitored in the workplace

Identification	Environmental limits		
	IOELV (8h)	50 ppm	275 mg/m ³
2-methoxy-1-methylethyl acetate CAS: 108-65-6 EC: 203-603-9	IOELV (STEL)	100 ppm	550 mg/m ³
	IOELV (8h)	50 ppm	221 mg/m ³
Xylene CAS: 1330-20-7 EC: 215-535-7	IOELV (STEL)	100 ppm	442 mg/m ³

DNEL (Workers):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Hexamethylene diisocyanate, oligomers CAS: 28182-81-2 EC: 931-274-8	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Inhalation	Non-applicable	1 mg/m ³	Non-applicable	0,5 mg/m ³
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Inhalation	960 mg/m ³	960 mg/m ³	480 mg/m ³	480 mg/m ³
2-methoxy-1-methylethyl acetate CAS: 108-65-6 EC: 203-603-9	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	153,5 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	275 mg/m ³	Non-applicable
Ethyl-3-ethoxypropionate CAS: 763-69-9 EC: 212-112-9	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	102 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	610 mg/m ³	610 mg/m ³
Xylene CAS: 1330-20-7 EC: 215-535-7	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	180 mg/kg	Non-applicable
	Inhalation	289 mg/m ³	289 mg/m ³	77 mg/m ³	Non-applicable

DNEL (General population):

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Inhalation	859,7 mg/m ³	859,7 mg/m ³	102,34 mg/m ³	102,34 mg/m ³
2-methoxy-1-methylethyl acetate CAS: 108-65-6 EC: 203-603-9	Oral	Non-applicable	Non-applicable	1,67 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	54,8 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	33 mg/m ³	Non-applicable
Ethyl-3-ethoxypropionate CAS: 763-69-9 EC: 212-112-9	Oral	Non-applicable	Non-applicable	1,2 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	24,2 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	72,6 mg/m ³	72,6 mg/m ³
Xylene CAS: 1330-20-7 EC: 215-535-7	Oral	Non-applicable	Non-applicable	1,6 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	108 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	14,8 mg/m ³	Non-applicable

PNEC:

Identification				
Hexamethylene diisocyanate, oligomers CAS: 28182-81-2 EC: 931-274-8	STP	38,3 mg/L	Fresh water	0,127 mg/L
	Soil	53182 mg/kg	Marine water	0,0127 mg/L
	Intermittent	1,27 mg/L	Sediment (Fresh water)	266700 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	26670 mg/kg
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	STP	35,6 mg/L	Fresh water	0,18 mg/L
	Soil	0,0903 mg/kg	Marine water	0,018 mg/L
	Intermittent	0,36 mg/L	Sediment (Fresh water)	0,981 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0,0981 mg/kg
2-methoxy-1-methylethyl acetate CAS: 108-65-6 EC: 203-603-9	STP	100 mg/L	Fresh water	0,635 mg/L
	Soil	0,29 mg/kg	Marine water	0,0635 mg/L
	Intermittent	6,35 mg/L	Sediment (Fresh water)	3,29 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0,329 mg/kg
Ethyl-3-ethoxypropionate CAS: 763-69-9 EC: 212-112-9	STP	50 mg/L	Fresh water	0,0609 mg/L
	Soil	0,048 mg/kg	Marine water	0,00609 mg/L
	Intermittent	0,609 mg/L	Sediment (Fresh water)	0,419 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0,0419 mg/kg
Xylene CAS: 1330-20-7 EC: 215-535-7	STP	6,58 mg/L	Fresh water	0,327 mg/L
	Soil	2,31 mg/kg	Marine water	0,327 mg/L
	Intermittent	0,327 mg/L	Sediment (Fresh water)	12,46 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	12,46 mg/kg



8.2 Exposure controls:

A.- General security and hygiene measures in the work place

As a preventative measure it is recommended to use basic Personal Protective Equipment, with the corresponding <<CE marking>> in accordance with Directive 89/686/EC. For more information on Personal Protective Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1.

All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

B.- Respiratory protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory respiratory tract protection	Filter mask for gases and vapours		EN 405:2001+A1:2009	Replace when there is a taste or smell of the contaminant inside the face mask. If the contaminant comes with warnings it is recommended to use isolation equipment.



C.- Specific protection for the hands

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)





Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory hand protection	Protective gloves against minor risks			Replace gloves in case of any sign of damage. For prolonged periods of exposure to the product for professional users/industrials, we recommend using CE III gloves in line with standards EN 420 and EN 374.

"As the product is a mixture of several substances, the resistance of the glove material can not be predicted in advance with total reliability and has therefore to be checked prior to the application"



D.- Ocular and facial protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory face protection	Panoramic glasses against splash/projections.		EN 166:2001 EN ISO 4007:2018	Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing.

E.- Body protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory complete body protection	Antistatic and fireproof protective clothing		EN 1149-1:2006 EN 1149-2:1997 EN 1149-3:2004 EN 168:2001 EN ISO 14116:2015 EN 1149-5:2018	Limited protection against flames.
 Mandatory foot protection	Safety footwear with antistatic and heat resistant properties		EN ISO 13287:2012 EN ISO 20345:2011	Replace boots at any sign of deterioration.

F.- Additional emergency measures

Emergency measure	Standards	Emergency measure	Standards
 Emergency shower	ANSI Z358-1 ISO 3864-1:2011, ISO 3864-4:2011	 Eyewash stations	DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2011

Environmental exposure controls:

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1.D

Volatile organic compounds:

With regard to Directive 2010/75/EU, this product has the following characteristics:

V.O.C. (Supply):	49,5 % weight
V.O.C. density at 20 °C:	502,43 kg/m ³ (502,43 g/L)
Average carbon number:	6,62
Average molecular weight:	126,94 g/mol

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

For complete information see the product datasheet.

Appearance:

Physical state at 20 °C:	Liquid
Appearance:	Fluid
Colour:	Colourless

*Not relevant due to the nature of the product, not providing information property of its hazards.

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)

Odour:	Solvent
Odour threshold:	Non-applicable *
Volatility:	
Boiling point at atmospheric pressure:	>124 °C
Vapour pressure at 20 °C:	Non-applicable *
Vapour pressure at 50 °C:	Non-applicable *
Evaporation rate at 20 °C:	Non-applicable *
Product description:	
Density at 20 °C:	1015 kg/m ³
Relative density at 20 °C:	1,015
Dynamic viscosity at 20 °C:	Non-applicable *
Kinematic viscosity at 20 °C:	Non-applicable *
Kinematic viscosity at 40 °C:	Non-applicable *
Concentration:	Non-applicable *
pH:	Non-applicable *
Vapour density at 20 °C:	Non-applicable *
Partition coefficient n-octanol/water 20 °C:	Non-applicable *
Solubility in water at 20 °C:	Non-applicable *
Solubility properties:	Insoluble in water
Decomposition temperature:	Non-applicable *
Melting point/freezing point:	Non-applicable *
Explosive properties:	Non-applicable *
Oxidising properties:	Non-applicable *
Flammability:	
Flash Point:	>25 °C
Flammability (solid, gas):	Non-applicable *
Autoignition temperature:	Non-applicable *
Lower flammability limit:	Not available
Upper flammability limit:	Not available
Explosive:	
Lower explosive limit:	Non-applicable *
Upper explosive limit:	Non-applicable *
9.2 Other information:	
Surface tension at 20 °C:	Non-applicable *
Refraction index:	Non-applicable *

*Not relevant due to the nature of the product, not providing information property of its hazards.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:

No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7.

10.2 Chemical stability:

Chemically stable under the conditions of storage, handling and use.

10.3 Possibility of hazardous reactions:

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

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SECTION 10: STABILITY AND REACTIVITY (continued)

10.4 Conditions to avoid:

Applicable for handling and storage at room temperature:

Shock and friction	Contact with air	Increase in temperature	Sunlight	Humidity
Not applicable	Not applicable	Risk of combustion	Avoid direct impact	Not applicable

10.5 Incompatible materials:

Acids	Water	Oxidising materials	Combustible materials	Others
Avoid strong acids	Not applicable	Avoid direct impact	Not applicable	Avoid alkalis or strong bases

10.6 Hazardous decomposition products:

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO₂), carbon monoxide and other organic compounds.

SECTION 11: TOXICOLOGICAL INFORMATION **

11.1 Information on toxicological effects:

The experimental information related to the toxicological properties of the product itself is not available

Dangerous health implications:

In case of exposure that is repetitive, prolonged or at concentrations higher than the recommended occupational exposure limits, adverse effects on health may result, depending on the means of exposure:

A- Ingestion (acute effect):

- Acute toxicity : Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for consumption. For more information see section 3.
- Corrosivity/Irritability: The consumption of a considerable dose can cause irritation in the throat, abdominal pain, nausea and vomiting.

B- Inhalation (acute effect):

- Acute toxicity : Exposure in high concentration can interfere with the central nervous system causing headache, dizziness, vertigo, nausea, vomiting, confusion, and in serious cases, loss of consciousness.
- Corrosivity/Irritability: Causes irritation in respiratory passages, which is normally reversible and limited to the upper respiratory passages.

C- Contact with the skin and the eyes (acute effect):

- Contact with the skin: Produces skin inflammation.
- Contact with the eyes: Produces eye damage after contact.

D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):

- Carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for the effects mentioned. For more information see section 3.
IARC: Xylene (3)
- Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
- Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

E- Sensitizing effects:

- Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous with sensitising effects. For more information see section 3.
- Cutaneous: Prolonged contact with the skin can result in episodes of allergic contact dermatitis.

F- Specific target organ toxicity (STOT) - single exposure:

Causes irritation in respiratory passages, which is normally reversible and limited to the upper respiratory passages.

G- Specific target organ toxicity (STOT)-repeated exposure:

** Changes with regards to the previous version

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SECTION 11: TOXICOLOGICAL INFORMATION ** (continued)

- Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
- Skin: Remove contaminated clothing and footwear, rinse skin or shower the person affected if appropriate with plenty of cold water and neutral soap. In serious cases see a doctor. If the product causes burns or freezing, clothing should not be removed as this could worsen the injury caused if it is stuck to the skin. If blisters form on the skin, these should never be burst as this will increase the risk of infection.

H- Aspiration hazard:

Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

Other information:

Non-applicable

Specific toxicology information on the substances:

Identification	Acute toxicity		Genus
	LD50 oral	LD50 dermal	
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	LD50 oral	12789 mg/kg	Rat
	LD50 dermal	14112 mg/kg	Rabbit
	LC50 inhalation	23,4 mg/L (4 h)	Rat
Hexamethylene diisocyanate, oligomers CAS: 28182-81-2 EC: 931-274-8	LD50 oral	5100 mg/kg	Rat
	LD50 dermal	>2000 mg/kg	
	LC50 inhalation	11 mg/L (4 h) (ATEi)	
Ethyl-3-ethoxypropionate CAS: 763-69-9 EC: 212-112-9	LD50 oral	4300 mg/kg	Rat
	LD50 dermal	10000 mg/kg	Rabbit
	LC50 inhalation	6,1 mg/L (4 h)	Rat
Xylene CAS: 1330-20-7 EC: 215-535-7	LD50 oral	2100 mg/kg	Rat
	LD50 dermal	1100 mg/kg (ATEi)	Rat
	LC50 inhalation	11 mg/L (4 h) (ATEi)	
2-methoxy-1-methylethyl acetate CAS: 108-65-6 EC: 203-603-9	LD50 oral	8532 mg/kg	Rat
	LD50 dermal	5100 mg/kg	Rat
	LC50 inhalation	30 mg/L (4 h)	Rat
Isobutyl isobutyrate CAS: 97-85-8 EC: 202-612-5	LD50 oral	12800 mg/kg	Rat
	LD50 dermal	>2000 mg/kg	
	LC50 inhalation	>20 mg/L (4 h)	

** Changes with regards to the previous version

SECTION 12: ECOLOGICAL INFORMATION **

The experimental information related to the eco-toxicological properties of the product itself is not available

12.1 Toxicity:

Identification	Acute toxicity		Species	Genus
	LC50	Non-applicable		
Hexamethylene diisocyanate, oligomers CAS: 28182-81-2 EC: 931-274-8	LC50	Non-applicable		
	EC50	Non-applicable		
	EC50	1000 mg/L (72 h)	Scenedesmus subspicatus	Algae
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	LC50	62 mg/L (96 h)	Leuciscus idus	Fish
	EC50	73 mg/L (24 h)	Daphnia magna	Crustacean
	EC50	675 mg/L (72 h)	Scenedesmus subspicatus	Algae
2-methoxy-1-methylethyl acetate CAS: 108-65-6 EC: 203-603-9	LC50	161 mg/L (96 h)	Pimephales promelas	Fish
	EC50	481 mg/L (48 h)	Daphnia sp.	Crustacean
	EC50	Non-applicable		
Ethyl-3-ethoxypropionate CAS: 763-69-9 EC: 212-112-9	LC50	45.3 mg/L (96 h)	Pimephales promelas	Fish
	EC50	785 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	120 mg/L (72 h)	Selenastrum capricornutum	Algae

** Changes with regards to the previous version

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**UTWARDZACZ DO LAKIERU BEZBARWNEGO UHS 4:1 - HARDENER
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SECTION 12: ECOLOGICAL INFORMATION ** (continued)

Identification	Acute toxicity		Species	Genus
Xylene CAS: 1330-20-7 EC: 215-535-7	LC50	13.5 mg/L (96 h)	Oncorhynchus mykiss	Fish
	EC50	3.4 mg/L (48 h)	Ceriodaphnia dubia	Crustacean
	EC50	10 mg/L (72 h)	Skeletonema costatum	Algae

12.2 Persistence and degradability:

Identification	Degradability		Biodegradability	
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	BOD5	Non-applicable	Concentration	Non-applicable
	COD	Non-applicable	Period	5 days
	BOD5/COD	0.79	% Biodegradable	84 %
2-methoxy-1-methylethyl acetate CAS: 108-65-6 EC: 203-603-9	BOD5	Non-applicable	Concentration	785 mg/L
	COD	Non-applicable	Period	8 days
	BOD5/COD	Non-applicable	% Biodegradable	100 %
Ethyl-3-ethoxypropionate CAS: 763-69-9 EC: 212-112-9	BOD5	0.34 g O ₂ /g	Concentration	6.6 mg/L
	COD	2 g O ₂ /g	Period	20 days
	BOD5/COD	0.17	% Biodegradable	59 %
Xylene CAS: 1330-20-7 EC: 215-535-7	BOD5	Non-applicable	Concentration	Non-applicable
	COD	Non-applicable	Period	28 days
	BOD5/COD	Non-applicable	% Biodegradable	88 %

12.3 Bioaccumulative potential:

Identification	Bioaccumulation potential	
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	BCF	4
	Pow Log	1.78
	Potential	Low
2-methoxy-1-methylethyl acetate CAS: 108-65-6 EC: 203-603-9	BCF	1
	Pow Log	0.43
	Potential	Low
Ethyl-3-ethoxypropionate CAS: 763-69-9 EC: 212-112-9	BCF	
	Pow Log	2.95
	Potential	
Xylene CAS: 1330-20-7 EC: 215-535-7	BCF	9
	Pow Log	2.77
	Potential	Low

12.4 Mobility in soil:

Identification	Absorption/desorption		Volatility	
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	Koc	Non-applicable	Henry	Non-applicable
	Conclusion	Non-applicable	Dry soil	Non-applicable
	Surface tension	2,478E-2 N/m (25 °C)	Moist soil	Non-applicable
Isobutyl isobutyrate CAS: 97-85-8 EC: 202-612-5	Koc	Non-applicable	Henry	Non-applicable
	Conclusion	Non-applicable	Dry soil	Non-applicable
	Surface tension	2,256E-2 N/m (25 °C)	Moist soil	Non-applicable
Ethyl-3-ethoxypropionate CAS: 763-69-9 EC: 212-112-9	Koc	Non-applicable	Henry	Non-applicable
	Conclusion	Non-applicable	Dry soil	Non-applicable
	Surface tension	2,753E-2 N/m (25 °C)	Moist soil	Non-applicable
Xylene CAS: 1330-20-7 EC: 215-535-7	Koc	202	Henry	524,86 Pa·m ³ /mol
	Conclusion	Moderate	Dry soil	Yes
	Surface tension	Non-applicable	Moist soil	Yes

12.5 Results of PBT and vPvB assessment:

Product fails to meet PBT/vPvB criteria

12.6 Other adverse effects:

Not described

** Changes with regards to the previous version

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SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

Code	Description	Waste class (Regulation (EU) No 1357/2014)
08 05 01*	waste isocyanates	Dangerous

Type of waste (Regulation (EU) No 1357/2014):

HP3 Flammable, HP5 Specific Target Organ Toxicity (STOT)/Aspiration Toxicity, HP6 Acute Toxicity, HP13 Sensitising

Waste management (disposal and evaluation):

Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98/EC). As under 15 01 (2014/955/EC) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. We do not recommend disposal down the drain. See paragraph 6.2.

Regulations related to waste management:

In accordance with Annex II of Regulation (EC) No 1907/2006 (REACH) the community or state provisions related to waste management are stated

Community legislation: Directive 2008/98/EC, 2014/955/EU, Regulation (EU) No 1357/2014

SECTION 14: TRANSPORT INFORMATION

Transport of dangerous goods by land:

With regard to ADR 2019 and RID 2019:



- 14.1 UN number:** UN1263
14.2 UN proper shipping name: PAINT RELATED MATERIAL
14.3 Transport hazard class(es): 3
Labels: 3
14.4 Packing group: III
14.5 Environmental hazards: No
14.6 Special precautions for user
Special regulations: 163, 367, 650
Tunnel restriction code: D/E
Physico-Chemical properties: see section 9
Limited quantities: 5 L
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code: Non-applicable

Transport of dangerous goods by sea:

With regard to IMDG 38-16:



- 14.1 UN number:** UN1263
14.2 UN proper shipping name: PAINT RELATED MATERIAL
14.3 Transport hazard class(es): 3
Labels: 3
14.4 Packing group: III
14.5 Environmental hazards: No
14.6 Special precautions for user
Special regulations: 163, 223, 955, 367
EmS Codes: F-E, S-E
Physico-Chemical properties: see section 9
Limited quantities: 5 L
Segregation group: Non-applicable
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code: Non-applicable

Transport of dangerous goods by air:

With regard to IATA/ICAO 2019:

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**UTWARDZACZ DO LAKIERU BEZBARWNEGO UHS 4:1 - HARDENER
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SECTION 14: TRANSPORT INFORMATION (continued)



14.1 UN number:	UN1263
14.2 UN proper shipping name:	PAINT RELATED MATERIAL
14.3 Transport hazard class(es):	3
Labels:	3
14.4 Packing group:	III
14.5 Environmental hazards:	No
14.6 Special precautions for user	
Physico-Chemical properties:	see section 9
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:	Non-applicable

SECTION 15: REGULATORY INFORMATION

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

Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Non-applicable
Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Non-applicable
Regulation (EC) No 1005/2009, about substances that deplete the ozone layer: Non-applicable
Article 95, REGULATION (EU) No 528/2012: Non-applicable
REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Non-applicable

Seveso III:

Section	Description	Lower-tier requirements	Upper-tier requirements
P5c		5000	50000

Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII REACH, etc ...):

Shall not be used, as substance or as mixtures in aerosol dispensers where these aerosol dispensers are intended for supply to the general public for entertainment and decorative purposes such as the following:

- metallic glitter intended mainly for decoration,
- artificial snow and frost,
- "whoopee" cushions,
- silly string aerosols,
- imitation excrement,
- horns for parties,
- decorative flakes and foams,
- artificial cobwebs,
- stink bombs.

Without prejudice to the application of other Community provisions on the classification, packaging and labelling of substances, suppliers shall ensure before the placing on the market that the packaging of aerosol dispensers referred to above is marked visibly, legibly and indelibly with:

'For professional users only'.

Shall not be used in:

- ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,
- tricks and jokes,
- games for one or more participants, or any article intended to be used as such, even with ornamental aspects.

Specific provisions in terms of protecting people or the environment:

It is recommended to use the information included in this safety data sheet as a basis for conducting workplace-specific risk assessments in order to establish the necessary risk prevention measures for the handling, use, storage and disposal of this product.

Other legislation:

The product could be affected by sectorial legislation

15.2 Chemical safety assessment:

The supplier has not carried out evaluation of chemical safety.

** Changes with regards to the previous version

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SECTION 16: OTHER INFORMATION **

Legislation related to safety data sheets:

This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) No 1907/2006 (Regulation (EC) No 2015/830)

Modifications related to the previous Safety Data Sheet which concerns the ways of managing risks.:

COMPOSITION/INFORMATION ON INGREDIENTS (SECTION 3, SECTION 11, SECTION 12):

- New declared substances
Ethyl-3-ethoxypropionate (763-69-9)
Isobutyl isobutyrate (97-85-8)

CLP Regulation (EC) No 1272/2008 (SECTION 2, SECTION 16):

- Hazard statements

Texts of the legislative phrases mentioned in section 2:

H226: Flammable liquid and vapour

H332: Harmful if inhaled

H315: Causes skin irritation

H319: Causes serious eye irritation

H317: May cause an allergic skin reaction

H335: May cause respiratory irritation

Texts of the legislative phrases mentioned in section 3:

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3

CLP Regulation (EC) No 1272/2008:

Acute Tox. 4: H312+H332 - Harmful in contact with skin or if inhaled

Acute Tox. 4: H332 - Harmful if inhaled

Flam. Liq. 3: H226 - Flammable liquid and vapour

Skin Irrit. 2: H315 - Causes skin irritation

Skin Sens. 1: H317 - May cause an allergic skin reaction

STOT SE 3: H335 - May cause respiratory irritation

STOT SE 3: H336 - May cause drowsiness or dizziness

Classification procedure:

Flam. Liq. 3: Calculation method (2.6.4.3)

Acute Tox. 4: Calculation method

Skin Irrit. 2: Calculation method

Eye Irrit. 2: Calculation method

Skin Sens. 1: Calculation method

STOT SE 3: Calculation method

Advice related to training:

Minimal training is recommended in order to prevent industrial risks for staff using this product and to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

Principal bibliographical sources:

<http://echa.europa.eu>

<http://eur-lex.europa.eu>

Abbreviations and acronyms:

ADR: European agreement concerning the international carriage of dangerous goods by road

IMDG: International maritime dangerous goods code

IATA: International Air Transport Association

ICAO: International Civil Aviation Organisation

COD: Chemical Oxygen Demand

BOD5: 5-day biochemical oxygen demand

BCF: Bioconcentration factor

LD50: Lethal Dose 50

LC50: Lethal Concentration 50

EC50: Effective concentration 50

Log-POW: Octanol-water partition coefficient

Koc: Partition coefficient of organic carbon

*** Changes with regards to the previous version*

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation at European and state level, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product, it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

- END OF SAFETY DATA SHEET -