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

1.1. Product Identification
HARDENER FOR TANK BEDLINER
UFI: 65Y0-M076-K002-0195*

1.2. Identified uses of the substance or mixture that are relevant and uses that are not recommended
Substance/Mixture Use: Chemical Hardener
Recommended restrictions on the use of: For professional use and industrial installations only

1.3. Safety Data Data Sheet Provider

Producer RANAL Sp. z o.o.
Łódzka 3
42-240 Rudniki, PL

Phone: + 48 34 329 45 03
Fax: + 48 34 320 12 16
Registration number 000029202

Person responsible for preparing the safety data sheet: ranal@ranal.pl

Distributor: Ada Color Ltd
176, Brezovsko Shose St.
4003 Plovdiv, Bulgaria
Mobile: +359896663052
Tel: +35932940456
Fax: +35932940457
Web: adacolor-bg.com

1.4. Emergency phone number
+48 34 329 45 03 (from 8.00 to 15.00)
112 (general emergency number)

Additional information: Bulgaria:
Toxicology Clinic at the Hospital for Active Treatment of
Sick Patients "N.I. Pirogov" Emergency phone number:
+359 02 9154 409 (during standard working hours except Saturdays and Sundays)
+359 02 9154 346 (continuous service)

SECTION 2: HAZARD IDENTIFICATION

2.1. Classification of the substance or mixture

Classification according to (Regulation (EC) HP 1272/2008)*:
Acute Tox. 4: Acute toxicity, inhalation category 4, H332
Aquatic Chronic 3: Harmful to the aquatic environment - long-term danger - category 3, H412
Eye Irrit. 2: Corrosive Effects/Eye Irritation, Category 2, H319
Flam. Liq. 3: Flammable liquids, category 3 , H226
Skin Irrit. 2: Caustic/Skin Irritation, Category 2, H315:
Skin Sens. 1: Sensitizing Effects/Skin Irritation, Category 1, H317
STOT RE 2: Specific Toxicity to Target Organs-— Hazard Category 2 (Oral), H373
STOT SE 3: Toxicity to specific target organs - single exposure, causes drowsiness and dizziness, category 3, H336
STOT SE 3: Airway Toxicity - Single Exposure, Category 3, H335.

2.2. Label elements
designation (according to Regulation (EC) HP 1272/2008).

Pictograms indicating the type of hazard:

*

Signal word: **Note.***

Phrases indicating the type of danger*:
H226 It lit liquid and vapor for me.
H315 Causes skin irritation.
H317 It can cause an allergic skin reaction. H319
It causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.* H336 May cause drowsiness or dizziness.
H373 May cause organ damage with prolonged or repeated exposure

H412 Harmful to aquatic organisms, with a long-lasting effect.*

Phrases indicating precautions*:
Prevent:
P210 Keep away from heat, hot surfaces. sparks, open fire and other sources of ignition. Smoking is prohibited.
P280 Use protective gloves Poultry// protective clothing / Shoes / protective face mask.* P304+P340 IF INHALED: Move the victim to fresh air and make sure they are in a position that allows them to breathe freely.*
P305+P351+P338: IN CASE OF EYE CONTACT: Rinse gently with water for several minutes. Remove contact lenses, if any, and as much as possible. Keep rinsing.*
P370+P378 In case of fire: Use an ABC type powder fire extinguisher for extinguishing.*
P501 Disposal of the contents/container in accordance with the regulations for hazardous waste or for packaging and packaging waste.*

Additional Information:
EUH204 Contains isocyanates. It can cause an allergic reaction.

Substances affecting classification*:
Diisocyanate hexamethylene, oligomers (<0.1% O=C=N-R-N=C=O); Xylene; N-butyl acetate; Ethylbenzene.

2.3. Other dangers
The substance does not meet the criteria for PBT and vPvB. *
Endocrine disrupting properties: The product does not meet the criteria. *

SECTION 3: INGREDIENTS/ INGREDIENT INFORMATION

3.1 Substance:
Not applicable.

3.2. Mixtures
Chemical description: polyisocyanate. *

Harmful ingredients:

Chemical name	HP CAS HP EC Index No.: Registration Number	Classified	Concentration (% ww.)
Hexamethylene diisocyanate, oligomeric (<0.1% O=C=N-R-N=C=O) (1) *	28182-81-2 931-274-8 Not applicable 01-2119485796-17-XXXX	Acute Tox. 4: H332; Skin Sens. 1: H317; STOT SE 3: H335- Внимание	25 - <5
Xylene [1]	1330-20-7 215-535-7 601-022-00-9 01-2119488216-32	Flam. Liq. 3; H226, Acute Tox. 4; H332, Acute Tox. 4; H312, Skin Irrit. 2; H315, Eye Irrit. 2; H319, STOT SE 3; H335, STOT RE 2; H373, Asp. Tox. 1; H304	25 - <50*
Acetate n-Butyl (1)	123-86-4 204-658-1 607-025-00-1 01-2119485493-29	Flam. Liq. 3; H226, STOT SE 3; H336	25 - <50*
Ethylbenzene (1)	100-41-4 202-849-4 601-023-00-4 01-2119489370-35	Flam. Liq. 2; H225, Acute Tox. 4; H332, STOT RE 2; H373, Asp. Tox. 1; H304, Aquatic Chronic 3, H412	5 - <10*
Hydrocarbons, C9, aromatic(1) *	64742-95-6 Not applicable Not applicable Not applicable	Aquatic Chronic 2: H411; Asp. Tox. 1: H304; Flam. Liq. 3: H226; STOT SE 3; H335; STOT SE 3: H336; EUH066- Hazard	1 - <2.5

(1)Substances posing a risk to health or the environment meeting the criteria set out in Regulation (EU) 2020/878. * For more information on the hazards of substances, see sections 12, 15 and 16 of the safety sheet. *

Expected acute toxicity of the substance referred to in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or determined in accordance with Annex I to that Regulation:

Identifier	Acute toxicity		Kind
Hexamethylene diisocyanate, oligomeric (<0.1% O=C=N-R-N=C=O)	LD50 Oral	Not applicable	
CAS: 28182-81-2	LD50 Dermal	Not applicable	
EC: 931-274-8	LC50 by inhalation	11 mg/L (ATEi)	
Xylene	LD50 Oral	Not applicable	
CAS 1330-20-7	LD50 Dermal	Not applicable	
WE 215-535-7	LC50 by inhalation	11 mg/L (ATEi)	

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures
Symptoms resulting from poisoning may appear some time after exposure, so in case of doubt, seek medical attention for direct exposure to a chemical product or persistent discomfort by showing the safety data sheet for that product. *

After inhalation: Remove the injured person from the site of exposure, provide him with air and rest conditions. In serious cases, such as cardiopulmonary insufficiency, first aid measures are required (mouth-to-mouth artificial respiration, cardiac massage, oxygen supply, etc.), which requires immediate medical attention. *

In case of skin contact: Remove contaminated clothes and shoes, rinse the skin or wash the affected person in the shower with plenty of cold water and neutral soap. In serious cases, consult a doctor. If the product causes burns or frost, do not take off the garment if it is stuck to the skin, as this can lead to even greater injuries. If blisters appear on the skin, they should not be punctured, as this can increase the risk of infection. *

In case of contact with eyes: Rinse eyes thoroughly with water for at least 15 minutes. If the victim wears contact lenses, they must be removed unless they are glued to the eye, otherwise you can cause further injuries. In all cases, consult a doctor as soon as possible after washing and show him the Material Safety Data Sheet. *

If swallowed: Do not induce vomiting, but if you vomit, keep your head bent to avoid the risk of aspiration. Provide peace of mind to the victim. Rinse the mouth and throat, as they may have been contaminated when swallowed.
*

4.2. The most significant acute symptoms and effects occurring after a certain period of time
Acute and delayed effects are listed in Sections 2 and 11. *

4.3. Instruction for any immediate medical care and special necessary treatment of the victim
Not applicable.*

SECTION 5: FIRE MEASURES

5.1. Fire extinguishers

Recommended fire extinguishers: Use powder fire extinguishers (ABC powder) or use fire extinguishing foam or carbon dioxide (CO2) fire extinguishers.*

Not recommended fire extinguishers: Strong jet of water.

5.2. Particular hazards arising from the substance or mixture
Incineration or thermal decomposition produces reactive by-products that can be highly toxic and therefore pose a serious health risk.*

5.3. Tips for firefighters
There must be minimal equipment and emergency equipment (fire blankets, portable first aid kit) in accordance with Directive 89/654/EC. There must be minimal equipment and emergency equipment (fire blankets, portable first aid kit...) in accordance with Directive 89/654/EC.*

Additional conditions*:
Follow the internal emergency plan and information leaflets about the actions you need to take after an accident or other emergency. Eliminate all ignition sources. In the event of a fire, containers and storage tanks for products that are prone to ignition, explosion or explosion due to high temperatures must be cooled. Avoid dropping products used to extinguish the fire into the aquatic environment.

SECTION 6: STEPS IN CASE OF UNINTENTIONAL RELEASE INTO THE ENVIRONMENT

6.1. Personal protective measures, protective equipment and emergency procedures

For non-emergency personnel*:
Evacuate the area and do not allow people without protective equipment to enter it. Evacuate the area and do not allow people without protective equipment to enter it. Wear personal protective equipment to protect yourself from potential contact with the spilled product (see section 8). Above all, prevent the formation of flammable mixtures of vapor and air by ventilation or the use of an inert agent. Eliminate ALL ignition sources. Remove static electricity by connecting all conductive surfaces where static electricity can be generated and making sure all surfaces are grounded.

Persons who provide assistance*:
Use protective equipment. Keep unprotected persons away from the scene of the accident. See section 8 of the Safety Data Sheet.

6.2. Precautions to protect the environment
The release of the product into the aquatic environment should be avoided at all costs. Store properly absorbed product in airtight containers. Notify the relevant authorities in case of exposure to the public or the environment. *

6.3. Methods and materials to limit spread and cleaning

Methods for removing pollution:
Absorb the spilled product with sand or neutral adsorbent and move it to a safe place. Do not use sawdust or other flammable adsorbents for absorption. If you have any doubts about disposal, please see section
13. *

6.4. Reference to other sections
For emergency contact information, see section 1. For information on safe operation, see Section 7. Exposure control Personal protective, see Section 8. For waste disposal, follow the recommendations in section 13.

SECTION 7: HANDLING AND STORAGE OF SUBSTANCES AND MIXTURES

7.1. Precautions for safe operation

A. Precautions for safe use*
Comply with applicable regulations to prevent industrial risks. Store container airtight. Control leaks and debris by removing them using safe methods (section 6). Prevent leakage from the container. Maintaining order and cleanliness in the area where dangerous products are used.

B. Technical recommendations for fire and explosion prevention*
Pour into well-ventilated areas, if possible by local aspiration. Fully control the ignition sources (mobile phones, sparks...) and use ventilation when cleaning. Avoid the formation of hazardous atmospheres in containers by using inert systems whenever possible. Pour slowly to avoid the formation of electrostatic charges. If electrostatic charge is possible: ensure a perfectly balanced connection, always use grounding, do not wear workwear made of acrylic fibers, use cotton clothing and convertible shoes. Comply with the essential safety requirements for equipment and systems set out in Directive 2014/34/EC (ATEX 100) and the minimum requirements for the protection of the safety and health of workers in accordance with the selection criteria of Directive 1999/92/EC (ATEX 137). Section 10 for information on conditions and materials to be avoided.

C. Technical recommendations for general occupational hygiene*.
Do not eat or drink while handling the product, wash your hands with appropriate detergents after handling.

D. Technical recommendations for the prevention of Hazard Prevention*
Due to the risk that this product poses to the environment, it is recommended to use it in an area equipped with pollution control barriers in the event of a spill and to store absorbent material nearby.

7.2. Conditions for safe storage, including information on incompatibilities

A. Technical storage measures*:
Minimum temperature: 5ºC
Maximum temperature. 30ºC

B. General storage conditions*:
Avoid sources of heat, radiation, static electricity and contact with food. For more information, see section 10.5 of the Safety Data Sheet.

7.3. Specific end-use(s)

Specific end-use(s):
There are no specific recommendations for using this product other than those previously stated.

SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTIVE EQUIPMENT

8.1. Parameters regarding control

Substances for which occupational exposure limit values must be monitored (European OEL, not national legislation*):
Directive (EU) 2000/39, Directive 2004/37/EC, Directive (EU) 2006/15, Directive (EU) 2009/161, Directive (EU) 2017/164, Directive (EU) 2019/1831.

Identification	Occupational exposure limitations		
Xylene CAS: 1330-20-7, WE: 215-535-7	IOELV (8 hours)	50 kp	221 mg/m³
	IOELV (COUPLE)	100 kp	442 mg/m³
Acetate n-butyl CAS: 123-86-4, WE: 204-658-1	IOELV (8 hours)	50 kp	241 mg/m³
	IOELV (COUPLE)	150 kp	723 mg/m³

Ethylbenzene CAS: 100-41-4, WE: 202-849-4	IOELV (8 hours)	100 kp	442 mg/m³
	IOELV (COUPLE)	200 ppm	884 mg/m³

DNEL (Employees)*:

Identification		Short exhibition		Long exposure	
		Systematically	Local	Systematically	Local
Hexamethylene diisocyanate, oligomeric (<0.1% O=C=N-R-N=C=O) CAS: 28182-81-2 EC: 931-274-8	Oral	Not applicable	Not applicable	Not applicable	Not applicable
	Skin	Not applicable	Not applicable	Not applicable	Not applicable
	Inhalation	Not applicable	1 mg/m³	Not applicable	0.5 mg/m³
Xylene CAS: 1330-20-7 EC: 215-535-7	Oral	Not applicable	Not applicable	Not applicable	Not applicable
	Skin	Not applicable	Not applicable	212 mg/kg	Not applicable
	Inhalation	442 mg/m³	442 mg/m³	221 mg/m³	221 mg/m³
N-Butyl Acetate CAS: 123-86-4 EC: 204-658-1	Oral	Not applicable	Not applicable	Not applicable	Not applicable
	Skin	11 mg/kg	Not applicable	11 mg/kg	Not applicable
	Inhalation	600 mg/m³	600 mg/m³	300 mg/m³	300 mg/m³
Ethylbenzene CAS: 100-41-4 EC: 202-849-4	Oral	Not applicable	Not applicable	Not applicable	Not applicable
	Skin	Not applicable	Not applicable	180 mg/kg	Not applicable
	Inhalation	Not applicable	293 mg/m³	77 mg/m³	Not applicable
Hydrocarbons, C9, aromatic CAS: 64742-95-6 EC: Not applicable	Oral	Not applicable	Not applicable	Not applicable	Not applicable
	Skin	Not applicable	Not applicable	25 mg/kg	Not applicable
	Inhalation	Not applicable	Not applicable	150 mg/m³	Not applicable

DMEL (Total Population)*:

Identification		Short exhibition		Long exposure	
		Systematically	Local	Systematically	Local
Xylene CAS: 1330-20-7 EC: 215-535-7	Oral	Not applicable	Not applicable	12,5 mg/kg	Not applicable
	Skin	Not applicable	Not applicable	125 mg/kg	Not applicable
	Inhalation	260 mg/m³	260 mg/m³	65.3 mg/m³	65.3 mg/m³
N-Butyl Acetate CAS: 123-86-4 EC: 204-658-1	Oral	2 mg/kg	Not applicable	2 mg/kg	Not applicable
	Skin	6 mg/kg	Not applicable	6 mg/kg	Not applicable
	Inhalation	300 mg/m³	300 mg/m³	35.7 mg/m³	35.7 mg/m³
Ethylbenzene CAS: 100-41-4 EC: 202-849-4	Oral	Not applicable	Not applicable	1,6 mg/kg	Not applicable
	Skin	Not applicable	Not applicable	Not applicable	Not applicable
	Inhalation	Not applicable	Not applicable	15 mg/m³	Not applicable
Hydrocarbons, C9, aromatic CAS: 64742-95-6 EC: Not applicable	Oral	Not applicable	Not applicable	11 mg/kg	Not applicable
	Skin	Not applicable	Not applicable	11 mg/kg	Not applicable
	Inhalation	Not applicable	Not applicable	32 mg/m³	Not applicable

PNEC

Identification				
Hexamethylene diisocyanate, oligomeric (<0.1% O=C=N-R-N=C=O) CAS: 28182-81-2 EC: 931-274-8	STP	88 mg/L	Sweet water	0.127 mg/L
	Soil	53183 mg/kg	Sea water	0.013 mg/L
	Seldom	1.27 mg/L	Sediment (Fresh Water)	266701 mg/kg
	Oral	Not applicable	Sediment of marine (waters)	26670 mg/kg
Xylene CAS: 1330-20-7 EC: 215-535-7	STP	6.58 mg/L	Sweet water	0.327 mg/L
	Soil	2,31 mg/kg	Sea water	0.327 mg/L
	Seldom	0.327 mg/L	Sediment (Fresh Water)	12,46 mg/kg
	Orally	Not applicable	Sediment (sea waters)	12,46 mg/kg
N-Butyl Acetate CAS: 123-86-4 EC: 204-658-1	STP	35.6 mg/L	Sweet water	0.18 mg/L
	Soil	0,09 mg/kg	Sea water	0.018 mg/L
	Seldom	0.36 mg/L	Sediment (Fresh Water)	0,981 mg/kg
	Oral	Not applicable	Sediment (sea waters)	0,098 mg/kg
Ethylbenzene CAS: 100-41-4 EC: 202-849-4	STP	9.6 mg/L	Sweet water	0.1 mg/L
	Soil	2,68 mg/kg	Sea water	0.01 mg/L
	Seldom	0.1 mg/L	Sediment (Fresh Water)	13,7 mg/kg
	Oral	0.02 g/kg	Sediment (sea waters)	1,37 mg/kg

8.2. Exposure control

A.- Individual protection measures, such as personal protective equipment*

Individual protection measures, such as personal protective equipment*:
As a precautionary measure, it is recommended to use basic personal protective equipment with the appropriate CE marking in >> accordance with Regulation (EU) 2016/425. More information about personal protective equipment (storage, use, cleaning, maintenance, protection class...) can be found in the information leaflet provided by the manufacturer. For more information, see section 7.1 of the Safety Data Sheet. All information contained in this document is

a recommendation requiring clarification from the Office for the Prevention of Occupational Risks, as it is not known whether the company has additional resources.

B. - Respiratory - protection*

Pictograms	PPE	Marking	Стандарти CEN	Zablezhki
 Mandatory respiratory protection	Filter mask for protection against gases and fumes	CE CAT III	EN 405:2002+A1:2010	Change the mask if there is a taste or smell of any substance in it. If the substance has warnings, the use of insulation equipment is recommended.

C.- Special hand protection *

Pictograms	PPE	Marking	Стандарти CEN	Zablezhki
 Mandatory hand protection	Chemical protection gloves (material: linear low-density polyethylene (LLDPE), drilling time: > 480 min, Thickness: 0.062 mm	CE CAT III	EN ISO 21420:2020	Replace gloves if there are signs of damage.

Since the product is a mixture of different substances, the resistance of the glove material cannot be determined in advance and must be tested before use.

D. - Eye and face protection*

Pictograms	PPE	Marking	Стандарти CEN	Zablezhki
 Mandatory face protection	Panoramic glasses for splash protection /sprinkles.	CE CAT II	EN 166:2002 EN ISO 4007:2018	Clean daily and disinfect periodically in accordance with the manufacturer's instructions. Use if there is a splash hazard.

E. - Body protection*

Pictograms	PPE	Marking	Стандарти CEN	Zablezhki
 Mandatory body protection	Protective and Anti-static clothing	CE CAT III	EN 1149-1:2006 EN 1149-2:1997 EN 1149-3:2004 EN 168:2002 EN ISO 14116:2015 EN 1149-5:2018	Limited flame protection.
 Mandatory body protection	Shoes with antistatic and heat-resistant properties	CE CAT III	EN ISO 13287:2020 EN ISO 20345:2011	Change shoes if there are signs of damage.

F. - Additional measures in relation to emergency protection *

Emergency measures	Norms	Emergency measures	Norms
Aviarien Shower	ANSI Z358-1 ISO 3864-1:2011, ISO 3864-4:2011	 Room for Eye wash	DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2011

Environmental Exposure Control*:
In accordance with Community environmental legislation, it is recommended to avoid the product and its container from entering the environment. For more information, see Section 7.1.D.

Volatile organic compounds*:
With regard to Directive 2010/75/EU, the product has the following Characteristics:
LZO (content):62.04 % by weight
LZO density at 20°C:602.39 kg/m³ (602.39 g/L)
Average carbon count:7.22
Medium Molecular Weight: 110,74 g/mol

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties*

Appearance:	liquid
Colour	achromatic
Smell:	Characteristic
Odor threshold*:	Not applicable

Volatility:

Boiling point at pressure*:	126 - 255 ºC
Flexibility of money in 20°C*	967 Pa
Flexibility of money in 50°C*	4930,5 Pa (4,93 kPa)
Evaporation rate at 20ºC*:	Not applicable

Product Description:

Density at 20ºC:	971 kg/m³
Relative density at 20ºC*:	Not applicable
Viscosity, dynamic at 20ºC	26cP *
Viscosity, kinematic at 20ºC*	3137.9 mm²/s
Viscosity kinematic at 40ºC*	>20.5 mm²/s
Concentration*	Not applicable
pH:	Not applicable
Density at 20ºC*:	Not applicable
Partition coefficient: n-octanol/water 20ºC*:	Not applicable
Solubility in water at 20ºC:	Not applicable
Solubility:	Not miscegening*
Decomposition temperature*:	Not applicable
Melting/ freezing temperature:	Not applicable*

Ignition:

Flash point:	24ºC *
Flammability (solid, gas)*:	Not applicable
Self-ignition temperature*:	421 ºC
Lower flammability limit*:	1% vol.
Upper flammability limit*:	7.6% vol.

Particle characteristics*:

Median diameter equivalent:	Not applicable

9.2. Other information

Information on physical risk classes*:

Explosive properties:	Not applicable*
Oxidirash properties:	Not applicable*
Substances that cause corrosion of metals:	Not applicable*
Heat of combustion:	Not applicable*

Aerosols – total percentage (by weight) of components flammable: Not applicable

Other safety features*:
Surface tension 20ºC:Not applicable* Refractive index N/A*
*Not applicable due to the nature of the product, it does not provide information about its hazards.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity
No decomposition if stored and applied as directed.

10.2. Chemical stability
Chemically stable under storage and application conditions.*

10.3. Possibility of dangerous reactions
Under certain conditions, dangerous reactions leading to an excessive increase in temperature or pressure should not be expected.

10.4. Conditions to avoid
*

Impact and friction	Air contact	Temperature rise	Sunlight:	Humidity

Not applicable	Not applicable	Risk of burns	Avoid direct influence	Not applicable

10.5. Incompatible materials

*

Sour:	Water:	Oxidizing materials	Flammable materials	Other
Avoid strong heartburn	Not applicable	Avoid direct influence	Not applicable	Avoid alkalis and strong foundations

10.6. Hazardous products in case of decay

For specific degradation products, see subsections 10.3, 10.4 and 10.5. Depending on the decomposition conditions, complex mixtures of chemicals can be released: carbon dioxide (CO_2), carbon monoxide and other organic compounds. *

SECTION 11: TOXICOLOGICAL INFORMATION

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

Experimental data on the toxicological properties of the product itself are not available. *

Dangerous health effects*:

In the case of repeated or prolonged exposure, or at concentrations higher than the established occupational exposure limits, health side effects may occur depending on the mode of exposure:
A. Ingestion (acute effect):
- Acute toxicity: Based on the available data, the classification criteria are not met, but the product contains substances classified as hazardous if ingested. For more information, see section 3.
- Corrosive/irritating action: Ingestion of significant doses can cause throat irritation, abdominal pain, nausea and vomiting.
B. Inhalation (acute effects):
Exposure to high concentrations can disrupt the functioning of the central nervous system, causing headaches and dizziness, nausea, vomiting, disorientation and, in severe cases, loss of consciousness.
- Acute toxicity: It causes irritation of the respiratory tract, which is usually a reversible process and is limited to the upper respiratory tract.
- Corrosive/irritating effect:
C. Contact with skin and eyes (acute effect):
- In contact with the skin: Causes inflammation of the skin.
- Eye contact: Causes eye damage on contact.
D. CMR effects (carcinogenicity, mutagenicity and reproductive toxicity):
-Carcinogenicity: Based on the available data, the classification criteria are not met, but the product contains substances classified as hazardous if ingested. For more information, see section 3 of the Safety Data Sheet.
- Mutagenicity: Based on the available data, the classification criteria are not met, but the product contains substances classified as hazardous if ingested. For more information, see section 3.
- Harmful effects of reproduction: Based on the available data, the classification criteria are not met, but the product contains substances classified as hazardous if ingested. For more information, see section 3.
E. Sensitizing effects:
- Respiratory: Based on the available data, the classification criteria are not met, but the product contains substances classified as hazardous if ingested. For more information, see section 3.
-Skin: Prolonged contact with the skin can cause episodes of allergic contact dermatitis.
F. Toxic effects on target organs (STOT), single exposure:
It causes irritation of the respiratory tract, which is usually a reversible process and is limited to the upper respiratory tract.
G. Specific Target Organ Toxicity (STOT) – Multiple Exposure:
Target Organ Specific Toxicity (STOT), repeated exposure: Exposure to high concentrations can impair the functioning of the central nervous system, causing headaches and dizziness, nausea, vomiting, disorientation, and in severe cases, loss of consciousness.
-Leather: Based on the available data, the classification criteria are not met. However, the product contains substances classified as hazardous by repeated exposure. For more information, see section 3.
H. Hazards caused by aspiration:
Based on the available data, the classification criteria are not met. However, the product contains substances classified as dangerous due to the listed effects. For more information, see section 3.

Additional Information*:

Not applicable.

Detailed toxicological information on the substance*:

Identification	Acute toxicity		Kind
N-Butyl Acetate CAS: 123-86-4 EC: 204-658-1	LD50 Oral	12789 mg/kg	Rat
	LD50 Dermal	14112 mg/kg	Rabbit
	LC50 by inhalation	23.4 mg/L (4 h)	Rat
Hexamethylene diisocyanate, oligomery (<0.1% O=C=N-R-N=C=O) CAS: 28182-81-2 EC: 931-274-8	LD50 Oral	2660 mg/kg	Rat
	LD50 Dermal	>2000 mg/kg	
	LC50 by inhalation	11 mg/L (ATEi)	
Hydrocarbons, C9, aromatic	LD50 Oral	>2000 mg/kg	

CAS: 64742-95-6 EC: Not applicable	LD50 Dermal	>2000 mg/kg	
	LC50 by inhalation	>20 mg/L	
Xylene CAS: 1330-20-7 EC: 215-535-7	LD50 Oral	2100 mg/kg	Rat
	LD50 Dermal	1100 mg/kg	Rat
	LC50 by inhalation	11 mg/L (ATEi)	
Ethylbenzene CAS: 100-41-4 EC: 202-849-4	LD50 Oral	3500 mg/kg	Rat
	LD50 Dermal	15354 mg/kg	Rabbit
	LC50 by inhalation	17.2 mg/L (4 h)	Rat

11.2. Information on other hazards*

Endocrine disrupting properties*:
Endocrine disrupting properties: The product does not meet the criteria.

Other information*:
Not applicable.

SECTION 12: ENVIRONMENTAL INFORMATION

Experimental data on the toxicological properties of the product itself are not available. Harmful to aquatic organisms, with a long-lasting effect.

12.1. Toxicity Acute

toxicity*:

Identification	Concentration		Species	Kind
Hexamethylene diisocyanate, oligomeric (<0.1% O=C=N-R-N=C=O) CAS: 28182-81-2 EC: 931-274-8	LC50	Not applicable		
	EC50	Not applicable		
	EC50	1000 mg/L (72 h)	(Scenedesmus subspicatus)	Algae
Xylene CAS: 1330-20-7 EC: 215-535-7	LC50	>10 - 100 mg/L (96 h)		Fish
	EC50	>10 - 100 mg/L (48 h)		Crustaceans
	EC50	>10 - 100 mg/L (72 h)		Algae
N-Butyl Acetate CAS: 123-86-4 EC: 204-658-1	LC50	Not applicable		
	EC50	Not applicable		
	EC50	675 mg/L (72 h)	(Scenedesmus subspicatus)	Algae
Ethylbenzene CAS: 100-41-4 EC: 202-849-4	LC50	42.3 mg/L (96 h)	Pimephales promelas	Fish
	EC50	75 mg/L (48 h)	Daphnia magna	Crustaceans
	EC50	63 mg/L (3 h)	Chlorella vulgaris	Algae
Hydrocarbons, C9, aromatic CAS: 64742-95-6 EC: Not applicable	LC50	>1 - 10 mg/L (96 h)		Fish
	EC50	>1 - 10 mg/L (48 h)		Crustaceans
	EC50	>1 - 10 mg/L (72 h)		Algae

Long-term toxicity*:

Identification	Concentration		Species	View
Xylene CAS: 1330-20-7 EC: 215-535-7	NOEC	1.3 mg/L	Oncorhynchus mykiss	Fish
	NOEC	1.17 mg/L	Ceriodaphnia dubia	Crustaceans
Acetate n-butyl CAS: 123-86-4 EC: 204-658-1	NOEC	Not applicable		
	NOEC	23.2 mg/L	Daphnia magna	Crustaceans
Ethylbenzene CAS: 100-41-4 EC: 202-849-4	NOEC	Not applicable		
	NOEC	0.96 mg/L	Ceriodaphnia dubia	Crustaceans

12.2. Durability and degradability

Information on the substance*:

Identification	Gradiability		Biodegradability:	
Xylene CAS: 1330-20-7 EC: 215-535-7	BOD5	Not applicable	Concentration	Not applicable
	Cod	Not applicable	Period	28 days
	BOD5/COD	Not applicable	% Biodegradable	88 %
N-Butyl Acetate CAS: 123-86-4 EC: 204-658-1	BOD5	Not applicable	Concentration	Not applicable
	Cod	Not applicable	Period	5 days
	BOD5/COD	Not applicable	% Biodegradable	84 %
Ethylbenzene CAS: 100-41-4 EC: 202-849-4	BOD5	Not applicable	Concentration	100 mg/L
	Cod	Not applicable	Period	14 days
	BOD5/COD	Not applicable	% Biodegradable	90 %

12.3. The ability to bioaccumulate

Information on the substance*:

Identification	Bioaccumulative potential:	
Xylene	BCF	9
CAS: 1330-20-7	Pow Log	2,77
EC: 215-535-7	Potential	Low
Acetate n-butyl	BCF	4
CAS: 123-86-4	Pow Log	1,78
EC: 204-658-1	Potential	Low
Ethylbenzene	BCF	1
CAS: 100-41-4	Pow Log	3,15
EC: 202-849-4	Potential	Low

12.4. Soil mobility

Information on the substance*:

Identification	Absorption / desorption		Lethality	
Xylene	Kane	202	Henry	524.86 Pa·m³/mol
CAS: 1330-20-7	Conclusion	Average	Dry soil	Yes
EC: 215-535-7	Surface Tension	Not applicable	Moist soil	Yes
N-Butyl Acetate	Kane	Not applicable	Henry	Not applicable
CAS: 123-86-4	Conclusion	Not applicable	Dry soil	Not applicable
EC: 204-658-1	Surface Tension	2,478E-2 N/m (25 ºC)	Moist soil	Not applicable
Ethylbenzene	Kane	520	Henry	798.44 Pa·m³/mol
CAS: 100-41-4	Conclusion	Average	Dry soil	Yes
EC: 202-849-4	Surface Tension	2,859E-2 N/m (25 ºC)	Moist soil	Yes

12.5. Results of the assessment of the properties of PBT and vPvB
The substance does not meet the criteria for PBT and vPvB. *

12.6. Endocrine Disruptive Properties *
Endocrine disrupting properties: The product does not meet the criteria.

12.7. Other adverse effects*
Not described. *

SECTION 13: WASTE DISPOSAL

13.1. Methods for disposal of product waste:

Waste code*:
08 01 11*: Waste paint and varnish containing organic solvents or other hazardous substances. Waste class (Regulation (EU) No 1657/2014) Hazardous.

Type of waste (Regulation (EU) No 1357/2014)*:
HP14 Ecotoxic, HP3 Flammable, HP5 Toxic Effects on Target Organs (STOT)/Aspiration Toxicity, HP6 Acute Toxicity, HP13 Sensitization, HP4 Irritant - Skin Irritation and Eye Damage.

Waste Management (Disposal and Assessment)*:
For assessment and disposal operations, an authorised waste manager must be consulted in accordance with Annexes 1 and 2 (Directive 2008/98/EC). In accordance with code 15 01 (2014/955/EC) and where the container has been in direct contact with the product, it shall be treated in the same way as the product itself. Otherwise, they will be treated as non-hazardous waste. Otherwise, they will be treated as non-hazardous waste. See section 6.2 of the Safety Data Sheet.

Waste management rules*:
In accordance with Annex II to Regulation (EC) No 1907/2006 (REACH), Community or national provisions relating to waste management have been adopted.

SECTION 14: TRANSPORT INFORMATION

Ground transport of dangerous goods*:
Regarding ADR 2023 and RID 2023:

14.1. UN number or identification number UN1263

14.2. Correct transport name UN (ONZ) PAINT-RELATED MATERIALS

14.3. Transport hazard class 3

Label	3

14.4. Packing Group	III
14.5. Danger to the environment	Not

14.6. Special precautions for consumers

Special provisions	163, 367, 650
Tunnel Restriction Code	D/E
Physicochemical properties	See Section 9
Limited quantities	5L

14.7. Maritime transport of bulk cargo in accordance with IMO instruments*.
Not applicable.

Sea transport of dangerous goods*:
Regarding IMDG 40-20:

14.1. UN number or identification number	UN1263
14.2. Correct transport name UN (ONZ)	PAINT-RELATED MATERIALS
14.3. Transport hazard class	3
Label	3

14.4. Packing Group	III
14.5. Marine pollution	Not

14.6. Special precautions for consumers

Special provisions	163, 223, 955, 367
EmS Code	F-E, S-E
Physicochemical properties	See Section 9
Limited quantities	5L
Segregation group	Not applicable

14.7. Maritime transport of bulk cargo in accordance with IMO instruments*.
Not applicable.

Transport of dangerous goods by air*:
Regarding IATA/ICAO 2023:

14.1. UN number or identification number	UN1263
14.2. Correct transport name UN (ONZ)	PAINT-RELATED MATERIALS
14.3. Transport hazard class	3
Label	3

14.4. Packing Group:	III
14.5. Environmental hazard:	Not

14.6. Special precautions for consumers

Physicochemical properties	See Section 9

14.7. Maritime transport of bulk cargo in accordance with IMO instruments*.
Not applicable.

SECTION 15: INFORMATION ON REGULATIONS

15.1. Safety, health and environmental regulations/legislation specific to the substance or mixture
*
Substances applying for authorisation under Regulation (EC) 1907/2006 (REACH): no data. Not applicable Substances listed in Annex XIV to REACH ('Authorisation List') and end date: Not applicable Regulation (EC) No 1005/2009 on substances that deplete the ozone layer: no data. Not applicable
Article 95 of Regulation (EU) No 528/2012: Not applicable
REGULATION (EU) No 649/2012 on imports and exports of hazardous chemical products: Not applicable

Sevesto III*:
Section P5c FLAMMABLE LIQUIDS
Lower Level Requirements: 5000 Higher
Level Requirements: 50000

Restrictions on the sale and use of certain hazardous substances and mixtures (REACH, Annex XVII, etc)*:
They should not be used in:
- decorative products designed to create light or colour effects through different phases, e.g. in decorative lamps and ashtrays,
- tricks and jokes,
- games intended for one or more participants, or products that are used as such, even for decorative purposes.

Detailed provisions on the protection of people or the environment:
It is recommended that the information collected in this Safety Data Sheet be used as preliminary data for local risk assessment in order to take the necessary steps to prevent the occurrence of risks related to the handling, use, storage and disposal of this product.

Other laws*:
The product may be subject to sectoral legislation.

15.2. Chemical safety assessment
The supplier did not carry out a chemical safety assessment.

SECTION 16: FRIEND INFORMATION

Regulations on safety data sheets*:
The safety data sheet must be provided in the official language of the country where the product is placed on the market. This safety data sheet has been prepared in accordance with ANNEX II - Guide for safety data sheet compilers - to Regulation (EC) No 1907/2006 (COMMISSION REGULATION). (EU) 2020/878

Texts of the regulation referred to in Section 2:
H336; May cause drowsiness or dizziness. H335: May cause irritation of the respiratory tract. H317: May cause an allergic skin reaction.
H412: Harmful to aquatic organisms, with a long-lasting effect.
H315 ; Causes skin irritation.
H373: May cause organ damage with prolonged or repeated exposure (Oral). H332: Harmful if inhaled.
H226: Flammable liquid and vapour,
H319: Eye irritant.

Texts of the regulation mentioned in Section 3:
The phrases indicated do not refer to the product itself; They are for information only and relate to the individual elements referred to in Section 3.

Regulation (EC) No 1272/2008 CLP:
Acute Tox. 4: H302+H312 - Harmful if swallowed in case of skin contact: or by inhalation. Acute Tox. 4: H332 - Harmful if inhaled.
Aquatic Chronic 2: H411 Toxic to aquatic life with a long-lasting effect. Aquatic Chronic 3: H412 - Harmful to aquatic organisms, with a long-lasting effect.
Asp. Tox. 1:H304 - May be deadly in - ingestion and entry into the respiratory tract. Eye Irrit. 2: H319 - Causes eye irritation.
Flam. Liq. 2: H225 - Highly flammable liquid and vapour. Flam. Liq. 3: H226 - Highly flammable liquids and vapors. Skin Irit. 2: H315 -Causes skin irritation.
Skin Sens. 1: H317 - May cause an allergic skin reaction.
STOT RE 2: H373 - May cause organ damage with prolonged or repeated exposure (inhalation).

STOT RE 2: H373 - Causes organ damage with prolonged or repeated exposure (Oral) STOT SE 3: H335 - May cause irritation of the respiratory tract.
STOT SE 3: H336 - May cause drowsiness or dizziness.

Classification procedure:
STOT SE 3: Calculation Method STOT
SE 3: Skin Sens Calculation Method. 1:
Calculation Method.
Aquatic Chronic 3: Skin Irrit Calculation
Method. 2: Calculation method.
STOT RE 2: Acute Tox Calculation
Method. 4: Calculation Method
Flam. Liq. 3: Method of calculation (2.6.4.3)
Eye Irrit. 2: Calculation method

Training Guidelines:
Training is recommended to prevent industrial risks to personnel using this product and to facilitate the understanding and interpretation of this safety data sheet and the product label.

Main sources of literature:
http://echa.europa.eu
http://eur-lex.europa.eu

Abbreviations and acronyms:
ADR European Treaty concerning the International Carriage of Dangerous Goods by
Road IMDG: International Dangerous Goods Code
IATA: International Air Carriers Association
ICAO: International Civil Aviation Organisation ChZT: Chemical oxygen demand
BOD5; Biochemical oxygen demand for 5 days BCF
Biodegradation coefficient:
LD50: Lethal dose 50 LC50;
Lethal concentration 50
EC50: Effective concentration 50
LogPOW: Partition coefficient – octanol/water:
Koc: Partition Factor for Organic Carbon UFI: Unique
Specimen ID
IARC International Agency for Research on Cancer

The information contained in this safety data sheet is based on sources and technical knowledge, as well as applicable legislation at European and national level, and its accuracy cannot be fully guaranteed. This information cannot be treated as a guarantee of the properties of the product, as it is only a description of the safety requirements. The methods and working conditions of users of this product are beyond our knowledge and control, so the user is solely responsible for taking appropriate measures to comply with legal requirements regarding the handling, storage, use and disposal of chemical products. The information contained in this safety data sheet applies only to the product, which must not be used for purposes other than those specified therein.

Map changes:
Tab Update:
9:Rewording of title 9.1: Information on basic physical and chemical properties
11: reworded to the title of subsection 11.1: Information on hazard classes as defined in Regulation (EC)
No 1272/2008, added subsection 11.2. Information on other hazards
12: new subsection 12.6: Endocrine disrupting properties.
14: Rewording of subsection 14.1: UN number or identification number; rewording of subsection 14.7: Maritime transport in bulk in accordance with IMO instruments.

Changes in the content of the sections:
1.1, 2.1, 2.2, 2.3, 3.2, 4.1, 4.2, 4.3, 5.1, 5.2, 5.3, 6.1, 6.2, 6.3, 7.1, 7.2, 8.1, 8.2, 9.1, 9.2, 10.2, 10.3, 10.4, 10.5, 10.6, 11.1, 11.2, 12.1, 12.2, 12.3, 12.4, 12.5, 12.6, 12.7, 13.1, 14.1, 14.2, 14.3, 14.4, 14.5, 14.6, 14.7, 15.1, 16.
General update.

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