


ŚRODEK GRUNTUJĄCY - GLASS PRIMER**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

- 1.1 Product identifier:** ŚRODEK GRUNTUJĄCY - GLASS PRIMER
Other means of identification:
UFI: KEDM-E0Y7-H00M-JPJW
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:**
Relevant uses (Professional users): Adhesives, sealing agents.
Relevant uses (Industrial user): Adhesives, sealing agents.
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:**
"BOLL" Wojciech Dalewski Spółka Jawna
ul. Chemiczna 3
65-713 Zielona Góra - Polska
Phone: 68 451 99 99 - Fax: 68 451 99 00
huszcza@boll.pl
<https://www.boll.pl>
- 1.4 Emergency telephone number:** +48 68 451 99 99 (OPEN 8.00 a.m. - 4.00 p.m.)

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.
Carc. 2: Carcinogenicity, Category 2, H351
Eye Irrit. 2: Eye irritation, Category 2, H319
Flam. Liq. 2: Flammable liquids, Category 2, H225
Resp. Sens. 1: Sensitisation, respiratory, Category 1, H334
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
STOT SE 3: Specific toxicity causing drowsiness and dizziness, single exposure, Category 3, H336
- 2.2 Label elements:**
CLP Regulation (EC) No 1272/2008:
Danger
- 
- Hazard statements:**
H225 - Highly flammable liquid and vapour.
H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H319 - Causes serious eye irritation.
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 - May cause respiratory irritation.
H336 - May cause drowsiness or dizziness.
H351 - Suspected of causing cancer.
- Precautionary statements:**
P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261: Avoid breathing vapours
P280: Wear protective gloves.
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P333+P313: If skin irritation or rash occurs: Get medical advice/attention.
P342+P311: If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
- Substances that contribute to the classification**

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ŚRODEK GRUNTUJĄCY - GLASS PRIMER
SECTION 2: HAZARDS IDENTIFICATION (continued)

Butanone; Benzene, 2,4-diisocyanato-1-methyl-, polymer with 1,6-diisocyanatohexane; 4,4'-methylenediphenyl diisocyanate, isomers and homologues; Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate; 4,4'-methylenediphenyl diisocyanate; Hexamethylene diisocyanate, oligomers; Hexamethylene-di-isocyanate; 4-methyl-m-phenylene diisocyanate

Additional Labelling:

As from 24 August 2023 adequate training is required before industrial or professional use.

UFI: KEDM-E0Y7-H00M-JPJW

Additional labeling:

9% of the mixture consists of ingredient(s) of unknown acute oral toxicity.

12% of the mixture consists of ingredient(s) of unknown acute inhalation toxicity.

Contains 17% of components with unknown hazards to the aquatic environment.

2.3 Other hazards:

Product does not meet PBT/vPvB criteria

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

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS
3.1 Substance:












Not relevant

3.2 Mixture:

Chemical description: a mixture of organic polyisocyanate in solution

Components:

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

Identification	Chemical name/Classification		Concentration
CAS: 78-93-3 EC: 201-159-0 Index: 606-002-00-3 REACH: 01-2119457290-43-XXXX	Butanone⁽¹⁾ ATP CLP00		40 - <60%
	Regulation 1272/2008	Eye Irrit. 2: H319; Flam. Liq. 2: H225; STOT SE 3: H336; EUH066 - Danger  	
CAS: 123-86-4 EC: 204-658-1 Index: 607-025-00-1 REACH: 01-2119485493-29-XXXX	N-butyl acetate⁽¹⁾ ATP CLP00		5 - <15%
	Regulation 1272/2008	Flam. Liq. 3: H226; STOT SE 3: H336; EUH066 - Warning  	
CAS: 26426-91-5 EC: Not relevant Index: Not relevant REACH: Not relevant	Benzene, 2,4-diisocyanato-1-methyl-, polymer with 1,6-diisocyanatohexane⁽¹⁾ Self-classified		5 - <10%
	Regulation 1272/2008	Skin Sens. 1: H317 - Warning 	
CAS: 9016-87-9 EC: 618-498-9 Index: Not relevant REACH: Not relevant	4,4'-methylenediphenyl diisocyanate, isomers and homologues⁽¹⁾ Self-classified		5 - <10%
	Regulation 1272/2008	Acute Tox. 4: H332; Carc. 2: H351; Eye Irrit. 2: H319; Resp. Sens. 1: H334; Skin Irrit. 2: H315; Skin Sens. 1: H317; STOT RE 2: H373; STOT SE 3: H335 - Danger  	
CAS: Not relevant EC: 905-806-4 Index: Not relevant REACH: 01-2119457015-45-XXXX	Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate⁽¹⁾ Self-classified		<10%
	Regulation 1272/2008	Acute Tox. 4: H332; Carc. 2: H351; Eye Irrit. 2: H319; Resp. Sens. 1: H334; Skin Irrit. 2: H315; Skin Sens. 1: H317; STOT RE 2: H373; STOT SE 3: H335 - Danger  	
CAS: 1333-86-4 EC: 215-609-9 Index: Not relevant REACH: Not relevant	Carbon black⁽²⁾ Not classified		2 - <5%
	Regulation 1272/2008		
CAS: 101-68-8 EC: 202-966-0 Index: 615-005-00-9 REACH: 01-2119457014-47-XXXX	4,4'-methylenediphenyl diisocyanate⁽¹⁾ ATP CLP00		1 - <5%
	Regulation 1272/2008	Acute Tox. 4: H332; Carc. 2: H351; Eye Irrit. 2: H319; Resp. Sens. 1: H334; Skin Irrit. 2: H315; Skin Sens. 1: H317; STOT RE 2: H373; STOT SE 3: H335 - Danger  	

⁽¹⁾ Substances presenting a health or environmental hazard which meet criteria laid down in Regulation (EU) No. 2020/878

⁽²⁾ Voluntarily-listed substance failing to meet any of the criteria set out in Regulation (EU) No. 2020/878

⁽³⁾ Substance with a Union workplace exposure limit

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ŚRODEK GRUNTUJĄCY - GLASS PRIMER
SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS (continued)

Identification	Chemical name/Classification	Concentration
CAS: 2530-83-8 EC: 219-784-2 Index: Not relevant REACH: 01-2119513212-58-XXXX	[3-(2,3-epoxypropoxy)propyl]trimethoxysilane⁽¹⁾ Self-classified Regulation 1272/2008 Aquatic Chronic 3: H412; Eye Dam. 1: H318 - Danger	<3%
CAS: 28182-81-2 EC: 931-274-8 Index: Not relevant REACH: 01-2119485796-17-XXXX	Hexamethylene diisocyanate, oligomers⁽¹⁾ Self-classified Regulation 1272/2008 Acute Tox. 4: H332; Skin Sens. 1: H317; STOT SE 3: H335 - Warning	<2.5%
CAS: 108-65-6 EC: 203-603-9 Index: 607-195-00-7 REACH: 01-2119475791-29-XXXX	2-methoxy-1-methylethyl acetate⁽³⁾ ATP ATP01 Regulation 1272/2008 Flam. Liq. 3: H226 - Warning	<2%
CAS: 822-06-0 EC: 212-485-8 Index: 615-011-00-1 REACH: 01-21194857571-37-XXXX	Hexamethylene-di-isocyanate⁽²⁾ Self-classified Regulation 1272/2008 Acute Tox. 1: H330; Acute Tox. 4: H302; Eye Irrit. 2: H319; Resp. Sens. 1: H334; Skin Irrit. 2: H315; Skin Sens. 1: H317; STOT SE 3: H335 - Danger	<0.1%
CAS: 584-84-9 EC: 209-544-5 Index: 615-006-00-4 REACH: 01-2119486974-18-XXXX	4-methyl-m-phenylene diisocyanate⁽²⁾ Self-classified Regulation 1272/2008 Acute Tox. 1: H330; Aquatic Chronic 3: H412; Carc. 2: H351; Eye Irrit. 2: H319; Resp. Sens. 1: H334; Skin Irrit. 2: H315; Skin Sens. 1: H317; STOT SE 3: H335 - Danger	<0.1%

⁽¹⁾ Substances presenting a health or environmental hazard which meet criteria laid down in Regulation (EU) No. 2020/878

⁽²⁾ Voluntarily-listed substance failing to meet any of the criteria set out in Regulation (EU) No. 2020/878

⁽³⁾ Substance with a Union workplace exposure limit

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

Other information:

Identification	Specific concentration limit
4,4'-methylenediphenyl diisocyanate, isomers and homologues CAS: 9016-87-9 EC: 618-498-9	% (w/w) >=5: Skin Irrit. 2 - H315 % (w/w) >=5: Eye Irrit. 2 - H319 % (w/w) >=0,1: Resp. Sens. 1 - H334 % (w/w) >=5: STOT SE 3 - H335
Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate CAS: Not relevant EC: 905-806-4	% (w/w) >=5: Skin Irrit. 2 - H315 % (w/w) >=5: Eye Irrit. 2 - H319 % (w/w) >=0,1: Resp. Sens. 1 - H334 % (w/w) >=5: STOT SE 3 - H335
4,4'-methylenediphenyl diisocyanate CAS: 101-68-8 EC: 202-966-0	% (w/w) >=5: Skin Irrit. 2 - H315 % (w/w) >=5: Eye Irrit. 2 - H319 % (w/w) >=0,1: Resp. Sens. 1 - H334 % (w/w) >=5: STOT SE 3 - H335
Hexamethylene-di-isocyanate CAS: 822-06-0 EC: 212-485-8	% (w/w) >=0,5: Resp. Sens. 1 - H334 % (w/w) >=0,5: Skin Sens. 1 - H317
4-methyl-m-phenylene diisocyanate CAS: 584-84-9 EC: 209-544-5	% (w/w) >=0,1: Resp. Sens. 1 - H334

Acute toxicity estimate for the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or as determined in accordance with Annex I to that Regulation:

Identification	Acute toxicity	Genus
Hexamethylene diisocyanate, oligomers CAS: 28182-81-2 EC: 931-274-8	LD50 oral	Not relevant
	LD50 dermal	Not relevant
	LC50 inhalation vapour	11 mg/L
4,4'-methylenediphenyl diisocyanate, isomers and homologues CAS: 9016-87-9 EC: 618-498-9	LD50 oral	Not relevant
	LD50 dermal	Not relevant
	LC50 inhalation vapour	11 mg/L
Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate CAS: Not relevant EC: 905-806-4	LD50 oral	Not relevant
	LD50 dermal	Not relevant
	LC50 inhalation vapour	11 mg/L

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ŚRODEK GRUNTUJĄCY - GLASS PRIMER
SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS (continued)

Identification	Acute toxicity		Genus
4,4'-methylenediphenyl diisocyanate CAS: 101-68-8 EC: 202-966-0	LD50 oral	Not relevant	
	LD50 dermal	Not relevant	
	LC50 inhalation vapour	11 mg/L *	
Hexamethylene-di-isocyanate CAS: 822-06-0 EC: 212-485-8	LD50 oral	959 mg/kg	
	LD50 dermal	Not relevant	
	LC50 inhalation vapour	0,12 mg/L	
4-methyl-m-phenylene diisocyanate CAS: 584-84-9 EC: 209-544-5	LD50 oral	Not relevant	
	LD50 dermal	Not relevant	
	LC50 inhalation vapour	0,5 mg/L	

*Equivalent ATE value of the substance applicable to the exposure route of the product. For the ATE value associated with the exposure route of the substance, see section 11.

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:

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

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

Not available

SECTION 5: FIREFIGHTING MEASURES
5.1 Extinguishing media:
Suitable extinguishing media:

Foam extinguisher (AB), Dry Chemical Powder (ABC) Fire Extinguisher, Carbon dioxide extinguisher (BC)

Unsuitable extinguishing media:

Water jet

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/EEC.

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**ŚRODEK GRUNTUJĄCY - GLASS PRIMER****SECTION 5: FIREFIGHTING MEASURES (continued)****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:****For non-emergency personnel:**

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. Remove 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.

For emergency responders:

Wear protective equipment. Keep unprotected persons away. See section 8.

6.2 Environmental precautions:

It is recommended to avoid environmental spillage of both the product and its container.

6.3 Methods and material for containment and cleaning up:

It is recommended:

Prevent the entrance of product in drains, sewers or watercourses. Absorb the spill using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. Collect the product in appropriate containers and manage it according to current legislation.

Spillages in water or sea:

Small spillages:

Contain spillage using barriers or similar equipment. Use suitable absorbents for collection and treat the waste in accordance with current regulations.

Large spillages:

If possible, contain spillage in open water using barriers or similar equipment. If this is not possible, try to control its spread and collect the product with suitable mechanical means. Always consult experts before using dispersants and make sure you have the necessary approvals if they are to be used. Treat the waste according to current regulations.

6.4 Reference to other sections:

See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE**7.1 Precautions for safe handling:****A.- General precautions for safe use**

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

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 2014/34/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 on general occupational hygiene

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

D.- Technical recommendations to prevent environmental risks

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ŚRODEK GRUNTUJĄCY - GLASS PRIMER
SECTION 7: HANDLING AND STORAGE (continued)

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.- Specific storage requirements

Minimum Temp.: 10 °C
 Maximum Temp.: 25 °C
 Maximum time: 12 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 (European OEL, not country-specific 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 limits		
	IOELV (8h)	200 ppm	600 mg/m ³
Butanone CAS: 78-93-3 EC: 201-159-0	IOELV (STEL)	300 ppm	900 mg/m ³
	IOELV (8h)	50 ppm	241 mg/m ³
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	IOELV (STEL)	150 ppm	723 mg/m ³
	IOELV (8h)	50 ppm	275 mg/m ³
2-methoxy-1-methylethyl acetate ⁽¹⁾ CAS: 108-65-6 EC: 203-603-9	IOELV (STEL)	100 ppm	550 mg/m ³

⁽¹⁾ Skin

DNEL (Workers):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Butanone CAS: 78-93-3 EC: 201-159-0	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	1161 mg/kg	Not relevant
	Inhalation	900 mg/m ³	Not relevant	600 mg/m ³	Not relevant
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	11 mg/kg	Not relevant	11 mg/kg	Not relevant
	Inhalation	600 mg/m ³	600 mg/m ³	300 mg/m ³	300 mg/m ³
4,4'-methylenediphenyl diisocyanate, isomers and homologues CAS: 9016-87-9 EC: 618-498-9	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	Not relevant	Not relevant
	Inhalation	Not relevant	0,1 mg/m ³	Not relevant	0,05 mg/m ³
Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate CAS: Not relevant EC: 905-806-4	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	Not relevant	Not relevant
	Inhalation	Not relevant	0,1 mg/m ³	Not relevant	0,05 mg/m ³
4,4'-methylenediphenyl diisocyanate CAS: 101-68-8 EC: 202-966-0	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	Not relevant	Not relevant
	Inhalation	Not relevant	0,1 mg/m ³	Not relevant	0,05 mg/m ³
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane CAS: 2530-83-8 EC: 219-784-2	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	10 mg/kg	Not relevant
	Inhalation	Not relevant	Not relevant	70,5 mg/m ³	Not relevant
Hexamethylene diisocyanate, oligomers CAS: 28182-81-2 EC: 931-274-8	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	Not relevant	Not relevant
	Inhalation	Not relevant	1 mg/m ³	Not relevant	0,5 mg/m ³

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ŚRODEK GRUNTUJĄCY - GLASS PRIMER
SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
2-methoxy-1-methylethyl acetate CAS: 108-65-6 EC: 203-603-9	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	796 mg/kg	Not relevant
	Inhalation	Not relevant	550 mg/m ³	275 mg/m ³	Not relevant
Hexamethylene-di-isocyanate CAS: 822-06-0 EC: 212-485-8	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	Not relevant	Not relevant
	Inhalation	Not relevant	0,07 mg/m ³	Not relevant	0,035 mg/m ³

DNEL (General population):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Butanone CAS: 78-93-3 EC: 201-159-0	Oral	Not relevant	Not relevant	31 mg/kg	Not relevant
	Dermal	Not relevant	Not relevant	412 mg/kg	Not relevant
	Inhalation	450 mg/m ³	Not relevant	106 mg/m ³	Not relevant
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	Oral	2 mg/kg	Not relevant	2 mg/kg	Not relevant
	Dermal	6 mg/kg	Not relevant	6 mg/kg	Not relevant
	Inhalation	300 mg/m ³	300 mg/m ³	35,7 mg/m ³	35,7 mg/m ³
4,4'-methylenediphenyl diisocyanate, isomers and homologues CAS: 9016-87-9 EC: 618-498-9	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	Not relevant	Not relevant
	Inhalation	Not relevant	0,05 mg/m ³	Not relevant	0,025 mg/m ³
Reaction mass of 4,4'-methylene-diphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate CAS: Not relevant EC: 905-806-4	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	Not relevant	Not relevant
	Inhalation	Not relevant	0,05 mg/m ³	Not relevant	0,025 mg/m ³
4,4'-methylene-diphenyl diisocyanate CAS: 101-68-8 EC: 202-966-0	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	Not relevant	Not relevant
	Inhalation	Not relevant	0,05 mg/m ³	Not relevant	0,025 mg/m ³
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane CAS: 2530-83-8 EC: 219-784-2	Oral	Not relevant	Not relevant	5 mg/kg	Not relevant
	Dermal	Not relevant	Not relevant	5 mg/kg	Not relevant
	Inhalation	Not relevant	Not relevant	17 mg/m ³	Not relevant
2-methoxy-1-methylethyl acetate CAS: 108-65-6 EC: 203-603-9	Oral	Not relevant	Not relevant	36 mg/kg	Not relevant
	Dermal	Not relevant	Not relevant	320 mg/kg	Not relevant
	Inhalation	Not relevant	Not relevant	33 mg/m ³	33 mg/m ³

PNEC:

Identification					
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	STP	35,6 mg/L	Fresh water	0,18 mg/L	
	Soil	0,09 mg/kg	Marine water	0,018 mg/L	
	Intermittent	0,36 mg/L	Sediment (Fresh water)	0,981 mg/kg	
	Oral	Not relevant	Sediment (Marine water)	0,098 mg/kg	
4,4'-methylene-diphenyl diisocyanate, isomers and homologues CAS: 9016-87-9 EC: 618-498-9	STP	1 mg/L	Fresh water	1 mg/L	
	Soil	1 mg/kg	Marine water	0,1 mg/L	
	Intermittent	10 mg/L	Sediment (Fresh water)	Not relevant	
	Oral	Not relevant	Sediment (Marine water)	Not relevant	
Reaction mass of 4,4'-methylene-diphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate CAS: Not relevant EC: 905-806-4	STP	1 mg/L	Fresh water	1 mg/L	
	Soil	1 mg/kg	Marine water	0,1 mg/L	
	Intermittent	10 mg/L	Sediment (Fresh water)	Not relevant	
	Oral	Not relevant	Sediment (Marine water)	Not relevant	
4,4'-methylene-diphenyl diisocyanate CAS: 101-68-8 EC: 202-966-0	STP	1 mg/L	Fresh water	1 mg/L	
	Soil	1 mg/kg	Marine water	0,1 mg/L	
	Intermittent	10 mg/L	Sediment (Fresh water)	Not relevant	
	Oral	Not relevant	Sediment (Marine water)	Not relevant	

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ŚRODEK GRUNTUJĄCY - GLASS PRIMER
SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Identification				
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane CAS: 2530-83-8 EC: 219-784-2	STP	8,2 mg/L	Fresh water	0,45 mg/L
	Soil	0,063 mg/kg	Marine water	0,045 mg/L
	Intermittent	0,45 mg/L	Sediment (Fresh water)	1,6 mg/kg
	Oral	Not relevant	Sediment (Marine water)	0,16 mg/kg
Hexamethylene diisocyanate, oligomers CAS: 28182-81-2 EC: 931-274-8	STP	88 mg/L	Fresh water	0,127 mg/L
	Soil	53183 mg/kg	Marine water	0,013 mg/L
	Intermittent	1,27 mg/L	Sediment (Fresh water)	266701 mg/kg
	Oral	Not relevant	Sediment (Marine water)	26670 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	0,064 mg/L
	Intermittent	6,35 mg/L	Sediment (Fresh water)	3,29 mg/kg
	Oral	Not relevant	Sediment (Marine water)	0,329 mg/kg
Hexamethylene-di-isocyanate CAS: 822-06-0 EC: 212-485-8	STP	8,42 mg/L	Fresh water	Not relevant
	Soil	Not relevant	Marine water	Not relevant
	Intermittent	Not relevant	Sediment (Fresh water)	Not relevant
	Oral	Not relevant	Sediment (Marine water)	Not relevant
4-methyl-m-phenylene diisocyanate CAS: 584-84-9 EC: 209-544-5	STP	1 mg/L	Fresh water	0,013 mg/L
	Soil	1 mg/kg	Marine water	0,001 mg/L
	Intermittent	0,125 mg/L	Sediment (Fresh water)	Not relevant
	Oral	Not relevant	Sediment (Marine water)	Not relevant



8.2 Exposure controls:
A.- Individual protection measures, such as personal protective equipment

As a preventative measure it is recommended to use basic Personal Protective Equipment, with the corresponding <<CE marking>> in accordance with Regulation (EU) 2016/425. 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 (Filter type: A)	 CAT III	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

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory hand protection	Chemical protective gloves (Material: Linear low-density polyethylene (LLDPE), Breakthrough time: > 480 min, Thickness: 0.062 mm)	 CAT III	EN ISO 21420:2020	Replace the gloves at any sign of deterioration.

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





D.- Eye and face protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory face protection	Face shield	 CAT II	EN ISO 16321-1:2022 + EN ISO 16321-3:2022 EN ISO 18526-(1,2,3,4):2020 EN ISO 18526-(1,2,3,4):2020 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



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ŚRODEK GRUNTUJĄCY - GLASS PRIMER
SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory complete body protection	Disposable clothing for protection against chemical risks, with antistatic and fireproof properties		EN 1149-1,2,3 EN 13034:2005+A1:2009 EN ISO 13982-1:2004/A1:2010 ISO 6529:2013 EN ISO 6530:2005 EN ISO 13688:2013/A1:2021 EN 464:1994	For professional use only. Clean periodically according to the manufacturer's instructions.
 Mandatory foot protection	Safety footwear for protection against chemical risk, with antistatic and heat resistant properties		EN ISO 13287:2019 EN ISO 20345:2022 EN 13832-1:2018	Replace boots at any sign of deterioration.

F.- Additional emergency measures

It is advised to implement additional emergency equipments in workplaces that are particularly exposed to the product or in situations where risk assessments highlight the necessity of such equipments.

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:

To comply with environmental protection regulations, it is recommended to prevent any spillage of the product and its container. For more detailed information, please refer to subsection 7.1.D.

Volatile organic compounds:

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

V.O.C. (Supply):	60,43 % weight
V.O.C. density at 20 °C:	574,09 kg/m ³ (574,09 g/L)
Average carbon number:	4,38
Average molecular weight:	80,89 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:	 Black
Odour:	Solvent
Odour threshold:	Not available *

Volatility:

Boiling point at atmospheric pressure:	79 °C
Vapour pressure at 20 °C:	10500 Pa
Vapour pressure at 50 °C:	Not available *
Evaporation rate at 20 °C:	Not available *

Product description:

Density at 20 °C:	950 kg/m ³
Relative density at 20 °C:	0,95
Dynamic viscosity at 20 °C:	Not available *

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

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**ŚRODEK GRUNTUJĄCY - GLASS PRIMER****SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)**

Kinematic viscosity at 20 °C:	52,6 mm ² /s
Kinematic viscosity at 40 °C:	Not available *
Concentration:	Not available *
pH:	Not available *
Vapour density at 20 °C:	Not available *
Partition coefficient n-octanol/water 20 °C:	Not available *
Solubility in water at 20 °C:	Not available *
Solubility properties:	Insoluble in water
Decomposition temperature:	Not available *
Melting point/freezing point:	Not available *
Flammability:	
Flash Point:	-8 °C
Flammability (solid, gas):	Not available *
Autoignition temperature:	≥200 °C
Lower flammability limit:	1,8 % Volume
Upper flammability limit:	11,5 % Volume
Particle characteristics:	
Median equivalent diameter:	Not available *

9.2 Other information:**Information with regard to physical hazard classes:**

Explosive properties:	Not available *
Oxidising properties:	Not available *
Corrosive to metals:	Not available *
Heat of combustion:	Not available *
Aerosols-total percentage (by mass) of flammable components:	Not available *

Other safety characteristics:

Surface tension at 20 °C:	Not available *
Refraction index:	Not available *

*Not available 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 from Safety Data Sheet.

10.2 Chemical stability:

Chemically stable under the indicated 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.

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

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**ŚRODEK GRUNTUJĄCY - GLASS PRIMER****SECTION 10: STABILITY AND REACTIVITY (continued)****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 hazard classes as defined in Regulation (EC) No 1272/2008:**

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, however, it contains 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 : Based on available data, the classification criteria are not met. However, it contains substances classified as hazardous for inhalation. For more information see section 3.
- 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: Causes serious eye irritation.

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

- Carcinogenicity: Exposure to this product can cause cancer. For more specific information on the possible health effects see section 2.
IARC: Carbon black (2B: Possibly carcinogenic to humans); 4,4'-methylenediphenyl diisocyanate, isomers and homologues (3: Not classifiable as to its carcinogenicity to humans); 4,4'-methylenediphenyl diisocyanate (3: Not classifiable as to its carcinogenicity to humans)
- Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous 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 hazardous for this effect. For more information see section 3.

E- Sensitizing effects:

- Respiratory: Prolonged exposure can result in specific respiratory hypersensitivity.
- Skin: 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:

- Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classification criteria are not met. However, it does contain substances which are classified as dangerous due to repetitive exposure. For more information see section 3.
- Skin: Based on available data, the classification criteria are not met. However, it does contain substances which are classified as dangerous due to repetitive exposure. For more information see section 3.

H- Aspiration hazard:

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

Other information:

Not relevant

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ŚRODEK GRUNTUJĄCY - GLASS PRIMER
SECTION 11: TOXICOLOGICAL INFORMATION (continued)
Specific toxicology information on the substances:

Identification	Acute toxicity		Genus
Butanone CAS: 78-93-3 EC: 201-159-0	LD50 oral	4000 mg/kg	Rat
	LD50 dermal	6400 mg/kg	Rabbit
	LC50 inhalation vapour	23,5 mg/L (4 h)	Rat
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 vapour	23,4 mg/L (4 h)	Rat
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 vapour	30 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 vapour	11 mg/L	
Carbon black CAS: 1333-86-4 EC: 215-609-9	LD50 oral	>2000 mg/kg	
	LD50 dermal	>2000 mg/kg	
	LC50 inhalation dust	>5 mg/L	
Benzene, 2,4-diisocyanato-1-methyl-, polymer with 1,6-diisocyanatohexane CAS: 26426-91-5 EC: Not relevant	LD50 oral	>2000 mg/kg	
	LD50 dermal	>2000 mg/kg	
	LC50 inhalation vapour	>20 mg/L	
4,4'-methylenediphenyl diisocyanate, isomers and homologues CAS: 9016-87-9 EC: 618-498-9	LD50 oral	>2000 mg/kg	
	LD50 dermal	>2000 mg/kg	
	LC50 inhalation vapour	11 mg/L	
Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate CAS: Not relevant EC: 905-806-4	LD50 oral	>2000 mg/kg	
	LD50 dermal	>2000 mg/kg	
	LC50 inhalation vapour	11 mg/L	
4,4'-methylenediphenyl diisocyanate CAS: 101-68-8 EC: 202-966-0	LD50 oral	7616 mg/kg	Rat
	LD50 dermal	10000 mg/kg	Rabbit
	LC50 inhalation dust	1,5 mg/L	
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane CAS: 2530-83-8 EC: 219-784-2	LD50 oral	8025 mg/kg	Rat
	LD50 dermal	4250 mg/kg	Rabbit
	LC50 inhalation vapour	>20 mg/L	
Hexamethylene-di-isocyanate CAS: 822-06-0 EC: 212-485-8	LD50 oral	959 mg/kg	Rat
	LD50 dermal	7000 mg/kg	Rat
	LC50 inhalation vapour	0,12 mg/L	Rat
4-methyl-m-phenylene diisocyanate CAS: 584-84-9 EC: 209-544-5	LD50 oral	5840 mg/kg	Rat
	LD50 dermal	>2000 mg/kg	
	LC50 inhalation vapour	0,5 mg/L	Rat

11.2 Information on other hazards:
Endocrine disrupting properties

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

Other information

Not relevant

SECTION 12: ECOLOGICAL INFORMATION

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

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

12.1 Toxicity:
Acute toxicity:

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ŚRODEK GRUNTUJĄCY - GLASS PRIMER
SECTION 12: ECOLOGICAL INFORMATION (continued)

Identification	Concentration		Species	Genus
	LC50	EC50		
Butanone CAS: 78-93-3 EC: 201-159-0	LC50	3220 mg/L (96 h)	Pimephales promelas	Fish
	EC50	5091 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	4300 mg/L (168 h)	Scenedesmus quadricauda	Algae
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	LC50	Not relevant		
	EC50	Not relevant		
	EC50	675 mg/L (72 h)	Scenedesmus subspicatus	Algae
Carbon black CAS: 1333-86-4 EC: 215-609-9	LC50	1000 mg/L (96 h)	Brachydanio rerio	Fish
	EC50	5600 mg/L (24 h)	Daphnia magna	Crustacean
	EC50	Not relevant		
4,4'-methylenediphenyl diisocyanate CAS: 101-68-8 EC: 202-966-0	LC50	1000 mg/L (96 h)	Brachydanio rerio	Fish
	EC50	Not relevant		
	EC50	Not relevant		
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane CAS: 2530-83-8 EC: 219-784-2	LC50	55 mg/L (96 h)	Cyprinus carpio	Fish
	EC50	324 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	Not relevant		
Hexamethylene diisocyanate, oligomers CAS: 28182-81-2 EC: 931-274-8	LC50	Not relevant		
	EC50	Not relevant		
	EC50	1000 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	Not relevant		
4-methyl-m-phenylene diisocyanate CAS: 584-84-9 EC: 209-544-5	LC50	>10 - 100 mg/L (96 h)		Fish
	EC50	>10 - 100 mg/L (48 h)		Crustacean
	EC50	>10 - 100 mg/L (72 h)		Algae

Chronic toxicity:

Identification	Concentration		Species	Genus
	NOEC	EC50		
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	NOEC	Not relevant		
	NOEC	23,2 mg/L	Daphnia magna	Crustacean
4,4'-methylenediphenyl diisocyanate CAS: 101-68-8 EC: 202-966-0	NOEC	Not relevant		
	NOEC	10 mg/L	Daphnia magna	Crustacean
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane CAS: 2530-83-8 EC: 219-784-2	NOEC	Not relevant		
	NOEC	100 mg/L	Daphnia magna	Crustacean
2-methoxy-1-methylethyl acetate CAS: 108-65-6 EC: 203-603-9	NOEC	47,5 mg/L	Oryzias latipes	Fish
	NOEC	100 mg/L	Daphnia magna	Crustacean
4-methyl-m-phenylene diisocyanate CAS: 584-84-9 EC: 209-544-5	NOEC	Not relevant		
	NOEC	1,1 mg/L	Daphnia magna	Crustacean

12.2 Persistence and degradability:
Substance-specific information:

Identification	Degradability		Biodegradability	
	BOD5	COD	Concentration	Period
Butanone CAS: 78-93-3 EC: 201-159-0	BOD5	2,03 g O2/g	Concentration	Not relevant
	COD	2,31 g O2/g	Period	20 days
	BOD5/COD	0,88	% Biodegradable	89 %
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	BOD5	Not relevant	Concentration	Not relevant
	COD	Not relevant	Period	5 days
	BOD5/COD	Not relevant	% Biodegradable	84 %
2-methoxy-1-methylethyl acetate CAS: 108-65-6 EC: 203-603-9	BOD5	Not relevant	Concentration	785 mg/L
	COD	Not relevant	Period	8 days
	BOD5/COD	Not relevant	% Biodegradable	100 %
4-methyl-m-phenylene diisocyanate CAS: 584-84-9 EC: 209-544-5	BOD5	Not relevant	Concentration	100 mg/L
	COD	Not relevant	Period	28 days
	BOD5/COD	Not relevant	% Biodegradable	0 %

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ŚRODEK GRUNTUJĄCY - GLASS PRIMER
SECTION 12: ECOLOGICAL INFORMATION (continued)
12.3 Bioaccumulative potential:
Substance-specific information:

Identification	Bioaccumulation potential	
Butanone CAS: 78-93-3 EC: 201-159-0	BCF	3
	Pow Log	0.29
	Potential	Low
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	BCF	4
	Pow Log	1.78
	Potential	Low
4,4'-methylenediphenyl diisocyanate CAS: 101-68-8 EC: 202-966-0	BCF	150
	Pow Log	4.51
	Potential	High
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane CAS: 2530-83-8 EC: 219-784-2	BCF	
	Pow Log	0.5
	Potential	
2-methoxy-1-methylethyl acetate CAS: 108-65-6 EC: 203-603-9	BCF	1
	Pow Log	0.43
	Potential	Low

12.4 Mobility in soil:

Identification	Absorption/desorption		Volatility	
Butanone CAS: 78-93-3 EC: 201-159-0	Koc	30	Henry	5,77 Pa·m ³ /mol
	Conclusion	Very High	Dry soil	Yes
	Surface tension	2,396E-2 N/m (25 °C)	Moist soil	Yes
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	Koc	Not relevant	Henry	Not relevant
	Conclusion	Not relevant	Dry soil	Not relevant
	Surface tension	2,478E-2 N/m (25 °C)	Moist soil	Not relevant
4,4'-methylenediphenyl diisocyanate CAS: 101-68-8 EC: 202-966-0	Koc	Not relevant	Henry	Not relevant
	Conclusion	Not relevant	Dry soil	Not relevant
	Surface tension	2,068E-2 N/m (283,45 °C)	Moist soil	Not relevant

Insoluble in water

12.5 Results of PBT and vPvB assessment:

Product does not meet PBT/vPvB criteria

12.6 Endocrine disrupting properties:

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

12.7 Other adverse effects:

Not described

SECTION 13: DISPOSAL CONSIDERATIONS
13.1 Waste treatment methods:

Code	Description	Waste class (Regulation (EU) No 1357/2014)
08 04 09*	waste adhesives and sealants containing organic solvents or other hazardous substances	Hazardous

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

HP3 Flammable, HP5 Specific Target Organ Toxicity (STOT)/Aspiration Toxicity, HP6 Acute Toxicity, HP7 Carcinogenic, HP4 Irritant — skin irritation and eye damage

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-hazardous residue. Waste should not be disposed of to drains. See paragraph 6.2.

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ŚRODEK GRUNTUJĄCY - GLASS PRIMER**SECTION 13: DISPOSAL CONSIDERATIONS (continued)****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 2025 and RID 2025:



- | | |
|--|----------------|
| 14.1 UN number or ID number: | UN1866 |
| 14.2 UN proper shipping name: | RESIN SOLUTION |
| 14.3 Transport hazard class(es): | 3 |
| Labels: | 3 |
| 14.4 Packing group: | II |
| 14.5 Environmental hazards: | No |
| 14.6 Special precautions for user | |
| Special regulations: | Not relevant |
| Tunnel restriction code: | D/E |
| Physico-Chemical properties: | see section 9 |
| Limited quantities: | 5 L |
| 14.7 Maritime transport in bulk according to IMO instruments: | Not relevant |

Transport of dangerous goods by sea:

With regard to IMDG 42-24:



- | | |
|--|----------------|
| 14.1 UN number or ID number: | UN1866 |
| 14.2 UN proper shipping name: | RESIN SOLUTION |
| 14.3 Transport hazard class(es): | 3 |
| Labels: | 3 |
| 14.4 Packing group: | II |
| 14.5 Marine pollutant: | No |
| 14.6 Special precautions for user | |
| Special regulations: | Not relevant |
| EmS Codes: | F-E, S-E |
| Physico-Chemical properties: | see section 9 |
| Limited quantities: | 5 L |
| Segregation group: | Not relevant |
| 14.7 Maritime transport in bulk according to IMO instruments: | Not relevant |

Transport of dangerous goods by air:

With regard to IATA/ICAO 2026:



- | | |
|--|----------------|
| 14.1 UN number or ID number: | UN1866 |
| 14.2 UN proper shipping name: | RESIN SOLUTION |
| 14.3 Transport hazard class(es): | 3 |
| Labels: | 3 |
| 14.4 Packing group: | II |
| 14.5 Environmental hazards: | No |
| 14.6 Special precautions for user | |
| Physico-Chemical properties: | see section 9 |
| 14.7 Maritime transport in bulk according to IMO instruments: | Not relevant |

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ŚRODEK GRUNTUJĄCY - GLASS PRIMER
SECTION 15: REGULATORY INFORMATION
15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

- Article 95, REGULATION (EU) No 528/2012: Not relevant
- Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Not relevant
- Regulation (EU) 2019/1021 on persistent organic pollutants: Not relevant
- Regulation (EU) No 2024/590, about substances that deplete the ozone layer: Not relevant
- REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Not relevant
- Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Not relevant

Seveso III:

Section	Description	Lower-tier requirements	Upper-tier requirements
P5c	FLAMMABLE LIQUIDS	5000,000	50000,000

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

Contains more than 0.1 % of 4,4'-methylenediphenyl diisocyanate, 4,4'-methylenediphenyl diisocyanate, isomers and homologues by weight. This product may not be distributed in its present form for first-time sale to the general public after 27th December 2010 unless the packaging contains protective gloves meeting the provisions of Regulation (EU) 2016/425.

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.

Contains more than 0.1 % of diisocyanates by weight. 1. Shall not be used as substances on their own, as a constituent in other substances or in mixtures for industrial and professional use(s) after 24 August 2023, unless:

(a) the concentration of diisocyanates individually and in combination is less than 0,1 % by weight, or (b) the employer or self-employed ensures that industrial or professional user(s) have successfully completed training on the safe use of diisocyanates prior to the use of the substance(s) or mixture(s).

2. Shall not be placed on the market as substances on their own, as a constituent in other substances or in mixtures for industrial and professional use(s) after 24 February 2022, unless:

(a) the concentration of diisocyanates individually and in combination is less than 0,1 % by weight, or (b) the supplier ensures that the recipient of the substance(s) or mixture(s) is provided with information on the requirements referred to in point (b) of paragraph 1 and the following statement is placed on the packaging, in a manner that is visibly distinct from the rest of the label information: "As from 24 August 2023 adequate training is required before industrial or professional use".

3. For the purpose of this entry "industrial and professional user(s)" means any worker or self-employed worker handling diisocyanates on their own, as a constituent in other substances or in mixtures for industrial and professional use(s) or supervising these tasks.

4. The training referred to in point (b) of paragraph 1 shall include the instructions for the control of dermal and inhalation exposure to diisocyanates at the workplace without prejudice to any national occupational exposure limit value or other appropriate risk management measures at national level. Such training shall be conducted by an expert on occupational safety and health with competence acquired by relevant vocational training. That training shall cover as a minimum:

(a) the training elements in point (a) of paragraph 5 for all industrial and professional use(s).

(b) the training elements in points (a) and (b) of paragraph 5 for the following uses:

- handling open mixtures at ambient temperature (including foam tunnels)
- spraying in a ventilated booth
- application by roller
- application by brush
- application by dipping and pouring
- mechanical post treatment (e.g. cutting) of not fully cured articles which are not warm anymore
- cleaning and waste
- any other uses with similar exposure through the dermal and/or inhalation route

(c) the training elements in points (a), (b) and (c) of paragraph 5 for the following uses:

- handling incompletely cured articles (e.g. freshly cured, still warm)
- foundry applications
- maintenance and repair that needs access to equipment
- open handling of warm or hot formulations (> 45 °C)
- spraying in open air, with limited or only natural ventilation (includes large industry working halls) and spraying with high energy (e.g. foams, elastomers)
- and any other uses with similar exposure through the dermal and/or inhalation route.

5. Training elements:

(a) general training, including on-line training, on:

- chemistry of diisocyanates
- toxicity hazards (including acute toxicity)

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ŚRODEK GRUNTUJĄCY - GLASS PRIMER**SECTION 15: REGULATORY INFORMATION (continued)**

- exposure to diisocyanates
 - occupational exposure limit values
 - how sensitisation can develop
 - odour as indication of hazard
 - importance of volatility for risk
 - viscosity, temperature, and molecular weight of diisocyanates
 - personal hygiene
 - personal protective equipment needed, including practical instructions for its correct use and its limitations
 - risk of dermal contact and inhalation exposure
 - risk in relation to application process used
 - skin and inhalation protection scheme
 - ventilation
 - cleaning, leakages, maintenance
 - discarding empty packaging
 - protection of bystanders
 - identification of critical handling stages
 - specific national code systems (if applicable)
 - behaviour-based safety
 - certification or documented proof that training has been successfully completed
- (b) intermediate level training, including on-line training, on:
- additional behaviour-based aspects
 - maintenance
 - management of change
 - evaluation of existing safety instructions
 - risk in relation to application process used
 - certification or documented proof that training has been successfully completed
- (c) advanced training, including on-line training, on:
- any additional certification needed for the specific uses covered
 - spraying outside a spraying booth
 - open handling of hot or warm formulations (> 45 °C)
 - certification or documented proof that training has been successfully completed
6. The training shall comply with the provisions set by the Member State in which the industrial or professional user(s) operate. Member States may implement or continue to apply their own national requirements for the use of the substance(s) or mixture (s), as long as the minimum requirements set out in paragraphs 4 and 5 are met.
7. The supplier referred to in point (b) of paragraph 2 shall ensure that the recipient is provided with training material and courses pursuant to paragraphs 4 and 5 in the official language(s) of the Member State(s) where the substance(s) or mixture(s) are supplied. The training shall take into consideration the specificity of the products supplied, including composition, packaging, and design.
8. The employer or self-employed shall document the successful completion of the training referred to in paragraphs 4 and 5. The training shall be renewed at least every five years.
9. Member States shall include in their reports pursuant to Article 117(1) the following information:
- (a) any established training requirements and other risk management measures related to the industrial and professional uses of diisocyanates foreseen in national law
 - (b) the number of cases of reported and recognised occupational asthma and occupational respiratory and dermal diseases in relation to diisocyanates
 - (c) national exposure limits for diisocyanates, if there are any
 - (d) information about enforcement activities related to this restriction.
10. This restriction shall apply without prejudice to other Union legislation on the protection of safety and health of workers at the workplace.
1. Shall not be placed on the market in articles, after 6 August 2026, if, under the test conditions specified in Appendix 14, the concentration of formaldehyde released from those articles exceeds:
- (a) 0,062 mg/m³ for furniture and wood-based articles
 - (b) 0,080 mg/m³ for articles other than furniture and wood-based articles.
- The first subparagraph shall not apply to:
- (a) articles in which formaldehyde or formaldehyde releasing substances are exclusively naturally present in the materials from which the articles are produced
 - (b) articles that are exclusively for outdoor use under foreseeable conditions
 - (c) articles in constructions, that are exclusively used outside the building shell and vapour barrier and that do not emit formaldehyde into indoor air
 - (d) articles exclusively for industrial or professional use unless formaldehyde released from them leads to exposure of the general public under foreseeable conditions of use
 - (e) articles for which the restriction laid down in entry 72 applies
 - (f) articles that are biocidal products within the scope of Regulation (EU) No 528/2012 of the European Parliament and of the Council

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**ŚRODEK GRUNTUJĄCY - GLASS PRIMER****SECTION 15: REGULATORY INFORMATION (continued)**

- (g) devices within the scope of Regulation (EU) 2017/745
 - (h) personal protective equipment within the scope of Regulation (EU) 2016/425
 - (i) articles intended to come into contact directly or indirectly with food within the scope of Regulation (EC) No 1935/2004
 - (j) second-hand articles.
2. Shall not be placed on the market in road vehicles after 6 August 2027 if, under the test conditions specified in Appendix 14, the concentration of formaldehyde in the interior of those vehicles exceeds 0,062 mg/m³.
The first subparagraph shall not apply to:
- (a) road vehicles exclusively for industrial or professional use unless the concentration of formaldehyde in the interior of those vehicles leads to exposure of the general public under foreseeable conditions of use
 - (b) second-hand vehicles.

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.

SECTION 16: OTHER INFORMATION**Legislation related to safety data sheets:**

The SDS shall be supplied in an official language of the country where the product is placed on the market. 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 (COMMISSION REGULATION (EU) 2020/878).

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

COMMISSION REGULATION (EU) 2020/878

Texts of the legislative phrases mentioned in section 2:

- H225: Highly flammable liquid and vapour.
- H315: Causes skin irritation.
- H319: Causes serious eye irritation.
- H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H317: May cause an allergic skin reaction.
- H351: Suspected of causing cancer.
- H335: May cause respiratory irritation.
- H336: May cause drowsiness or dizziness.

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. 1: H330 - Fatal if inhaled.
- Acute Tox. 4: H302 - Harmful if swallowed.
- Acute Tox. 4: H332 - Harmful if inhaled.
- Aquatic Chronic 3: H412 - Harmful to aquatic life with long lasting effects.
- Carc. 2: H351 - Suspected of causing cancer.
- Eye Dam. 1: H318 - Causes serious eye damage.
- Eye Irrit. 2: H319 - Causes serious eye irritation.
- Flam. Liq. 2: H225 - Highly flammable liquid and vapour.
- Flam. Liq. 3: H226 - Flammable liquid and vapour.
- Resp. Sens. 1: H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- Skin Irrit. 2: H315 - Causes skin irritation.
- Skin Sens. 1: H317 - May cause an allergic skin reaction.
- STOT RE 2: H373 - May cause damage to organs through prolonged or repeated exposure (Inhalation).
- STOT RE 2: H373 - May cause damage to organs through prolonged or repeated exposure.
- STOT SE 3: H335 - May cause respiratory irritation.
- STOT SE 3: H336 - May cause drowsiness or dizziness.

Classification procedure:

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**ŚRODEK GRUNTUJĄCY - GLASS PRIMER****SECTION 16: OTHER INFORMATION (continued)**

Flam. Liq. 2: Calculation method (2.6.4.3)

Skin Irrit. 2: Calculation method

Eye Irrit. 2: Calculation method

Resp. Sens. 1: Calculation method

Skin Sens. 1: Calculation method

Carc. 2: Calculation method

STOT SE 3: Calculation method

STOT SE 3: Calculation method

Advice related to training:

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: 5day biochemical oxygen demand

BCF: Bioconcentration factor

LD50: Lethal Dose 50

LC50: Lethal Concentration 50

EC50: Effective concentration 50

LogPOW: Octanolwater partition coefficient

Koc: Partition coefficient of organic carbon

UFI: unique formula identifier

IARC: International Agency for Research on Cancer

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 -