



ZMYWACZ LAKIERU

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

1.1 Product identifier: ZMYWACZ LAKIERU

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

Relevant uses: Product designed to remove varnish coatings from metal, glass, wood, concrete, brick and ceramic tiles.

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

1.3 Details of the supplier of the safety data sheet:

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

1.4 Emergency telephone number:

SECTION 2: HAZARDS IDENTIFICATION **

2.1 Classification of the substance or mixture:

CLP Regulation (EC) No 1272/2008:

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

Aerosol 1: Flammable aerosols, Category 1, H222

Aerosol 1: Pressurised container: May burst if heated., H229

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

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

2.2 Label elements:

CLP Regulation (EC) No 1272/2008:

Danger



Hazard statements:

H222 - Extremely flammable aerosol

H229 - Pressurised container: May burst if heated

H315 - Causes skin irritation

H319 - Causes serious eye irritation

Precautionary statements:

P102: Keep out of reach of children

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

P211: Do not spray on an open flame or other ignition source

P251: Do not pierce or burn, even after use

P271: Use only outdoors or in a well-ventilated area

P302+P352: IF ON SKIN: Wash with plenty of water

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

P410+P412: Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122°F

P501: Dispose of the contents/containers in accordance with the current legislation on waste treatment

2.3 Other hazards:

Product fails to meet PBT/vPvB criteria

** Changes with regards to the previous version

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS **

3.1 Substance:

Non-applicable

** Changes with regards to the previous version

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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS ** (continued)

3.2 Mixture:

Chemical description: active ingredient mixture with a propellant. Propellant: propane - butane

Components:

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

Identification	Chemical name/Classification	Concentration
CAS: 646-06-0 EC: 211-463-5 Index: 605-017-00-2 REACH: 01-2119490744-29-XXXX	1,3-dioxolane⁽¹⁾ ATP CLP00	<55 %
	Regulation 1272/2008 Flam. Liq. 2: H225 - Danger	
CAS: 106-97-8 EC: 203-448-7 Index: 601-004-00-0 REACH: 01-2119474691-32-XXXX	Butane⁽¹⁾ ATP CLP00	<20 %
	Regulation 1272/2008 Flam. Gas 1: H220; Press. Gas: H280 - Danger	
CAS: 109-87-5 EC: 203-714-2 Index: Non-applicable REACH: 01-2119664781-31-XXXX	Dimethoxymethane⁽¹⁾ ATP CLP00	<20 %
	Regulation 1272/2008 Acute Tox. 4: H302; Flam. Liq. 2: H225; STOT RE 2: H373 - Danger	
CAS: 74-98-6 EC: 200-827-9 Index: 601-003-00-5 REACH: 01-2119486944-21-XXXX	Propane⁽¹⁾ ATP CLP00	<10 %
	Regulation 1272/2008 Flam. Gas 1: H220; Press. Gas: H280 - Danger	
CAS: 1336-21-6 EC: Non-applicable Index: 007-001-01-2 REACH: 01-2119982985-14-XXXX	Ammonia = 25 %, aqueous solution⁽¹⁾ ATP CLP00	<3 %
	Regulation 1272/2008 Aquatic Acute 1: H400; Skin Corr. 1B: H314; STOT SE 3: H335 - Danger	
CAS: 64742-48-9 EC: 919-857-5 Index: Non-applicable REACH: 01-2119463258-33-XXXX	Hydrocarbons, C9-C11, n-alkanes, iso-alkanes, cyclics, <2% aromatics⁽¹⁾ Self-classified	<2 %
	Regulation 1272/2008 Asp. Tox. 1: H304; Flam. Liq. 3: H226; STOT SE 3: H336; EUH066 - Danger	
CAS: 75-28-5 EC: 200-857-2 Index: 601-004-00-0 REACH: 01-2119485395-27-XXXX	Isobutane⁽¹⁾ ATP CLP00	<1 %
	Regulation 1272/2008 Flam. Gas 1: H220; Press. Gas: H280 - Danger	

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

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

** Changes with regards to the previous version

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures:

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

By inhalation:

This product is not classified as hazardous through inhalation. However, in case of intoxication symptoms it is recommended to remove the person affected from the area of exposure, provide clean air and keep at rest. Request medical attention if symptoms persist.

By skin contact:

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

By eye contact:

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

By ingestion/aspiration:

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

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

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SECTION 4: FIRST AID MEASURES (continued)

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

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

Non-applicable

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media:

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

5.2 Special hazards arising from the substance or mixture:

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

5.3 Advice for firefighters:

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

Additional provisions:

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

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

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

6.2 Environmental precautions:

Avoid spillage into the aquatic environment as it contains substances potentially dangerous for this. Contain the product absorbed in hermetically sealed containers. In the case of serious spillage into the aquatic environment notify the relevant authority.

6.3 Methods and material for containment and cleaning up:

It is recommended:

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

6.4 Reference to other sections:

See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:

A.- Precautions for safe manipulation

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

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

Avoid the evaporation of the product as it contains flammable substances, which could form flammable vapour/air mixtures in the presence of sources of ignition. Control sources of ignition (mobile phones, sparks,...) and transfer at slow speeds to avoid the creation of electrostatic charges. Avoid splashes and pulverizations. Consult section 10 for conditions and materials that should be avoided.

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SECTION 7: HANDLING AND STORAGE (continued)

C.- Technical recommendations to prevent ergonomic and toxicological risks

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

D.- Technical recommendations to prevent environmental risks

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

7.2 Conditions for safe storage, including any incompatibilities:

A.- Technical measures for storage

Minimum Temp.: 10 °C

Maximum Temp.: 20 °C

Maximum time: 24 Months

B.- General conditions for storage

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

7.3 Specific end use(s):

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

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters:

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

Identification	Environmental limits		
	IOELV (8h)	20 ppm	14 mg/m ³
Ammonia = 25 %, aqueous solution CAS: 1336-21-6 EC: Non-applicable	IOELV (STEL)	50 ppm	36 mg/m ³

DNEL (Workers):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
1,3-dioxolane CAS: 646-06-0 EC: 211-463-5	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	-10,9 - 19,1 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	4 - 34 mg/m ³	Non-applicable
Dimethoxymethane CAS: 109-87-5 EC: 203-714-2	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	2,9 - 32,9 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	111,6 - 141,6 mg/m ³	Non-applicable
Hydrocarbons, C9-C11,n-alkanes, iso-alkanes, cyclics, <2% aromatics CAS: 64742-48-9 EC: 919-857-5	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	285 - 315 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	1485 - 1515 mg/m ³	Non-applicable

DNEL (General population):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
1,3-dioxolane CAS: 646-06-0 EC: 211-463-5	Oral	Non-applicable	Non-applicable	60 - 90 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	-14,2 - 15,8 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	-9,3 - 20,7 mg/m ³	Non-applicable
Dimethoxymethane CAS: 109-87-5 EC: 203-714-2	Oral	Non-applicable	Non-applicable	3,1 - 33,1 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	3,1 - 33,1 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	16,5 - 46,5 mg/m ³	Non-applicable
Hydrocarbons, C9-C11,n-alkanes, iso-alkanes, cyclics, <2% aromatics CAS: 64742-48-9 EC: 919-857-5	Oral	Non-applicable	Non-applicable	285 - 315 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	285 - 315 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	885 - 915 mg/m ³	Non-applicable

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

PNEC:

Identification				
1,3-dioxolane CAS: 646-06-0 EC: 211-463-5	STP	-14 - 16 mg/L	Fresh water	4,7 - 34,7 mg/L
	Soil	-12,38 - 17,62 mg/kg	Marine water	-13,03 - 16,97 mg/L
	Intermittent	-14,05 - 15,95 mg/L	Sediment (Fresh water)	62,7 - 92,7 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	-7,23 - 22,77 mg/kg
Dimethoxymethane CAS: 109-87-5 EC: 203-714-2	STP	9985 - 10015 mg/L	Fresh water	-0,42 - 29,58 mg/L
	Soil	-10,35 - 19,65 mg/kg	Marine water	-13,52 - 16,48 mg/L
	Intermittent	Non-applicable	Sediment (Fresh water)	-1,87 - 28,14 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	-13,69 - 16,31 mg/kg

8.2 Exposure controls:

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



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

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

B.- Respiratory protection



The use of protection equipment will be necessary if a mist forms or if the occupational exposure limits are exceeded.

C.- Specific protection for the hands



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

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



D.- Ocular and facial protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory face protection	Panoramic glasses against splash/projections.		EN 166:2001 EN ISO 4007:2012	Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing.

E.- Body protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory complete body protection	Antistatic and fireproof protective clothing		EN 1149-1:2006 EN 1149-2:1997 EN 1149-3:2004 EN 168:2001 EN ISO 14116:2015 EN 1149-5:2008	Limited protection against flames.

F.- Additional emergency measures

Emergency measure	Standards	Emergency measure	Standards
 Emergency shower	ANSI Z358-1 ISO 3864-1:2002	 Eyewash stations	DIN 12 899 ISO 3864-1:2002

Environmental exposure controls:

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

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Volatile organic compounds:

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

V.O.C. (Supply):	97,1 % weight
V.O.C. density at 20 °C:	809 kg/m ³ (809 g/L)
Average carbon number:	3,19
Average molecular weight:	76,55 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:	Paste
Colour:	Characteristic
Odour:	Characteristic
Odour threshold:	Non-applicable *

Volatility:

Boiling point at atmospheric pressure:	Non-applicable *
Vapour pressure at 20 °C:	>350000 Pa
Vapour pressure at 50 °C:	Non-applicable *
Evaporation rate at 20 °C:	Non-applicable *

Product description:

Density at 20 °C:	940 kg/m ³
Relative density at 20 °C:	0,94
Dynamic viscosity at 20 °C:	Non-applicable *
Kinematic viscosity at 20 °C:	Non-applicable *
Kinematic viscosity at 40 °C:	>20,5 cSt
Concentration:	Non-applicable *
pH:	Non-applicable *
Vapour density at 20 °C:	Non-applicable *
Partition coefficient n-octanol/water 20 °C:	Non-applicable *
Solubility in water at 20 °C:	Non-applicable *
Solubility properties:	Water-soluble
Decomposition temperature:	Non-applicable *
Melting point/freezing point:	Non-applicable *
Explosive properties:	Non-applicable *
Oxidising properties:	Non-applicable *

Flammability:

Flash Point:	Non Flammable (>60 °C)
Flammability (solid, gas):	Non-applicable *
Autoignition temperature:	Non-applicable *
Lower flammability limit:	Non-applicable *
Upper flammability limit:	Non-applicable *

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

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)

Explosive:

Lower explosive limit: Non-applicable *

Upper explosive limit: Non-applicable *

9.2 Other information:

Surface tension at 20 °C: Non-applicable *

Refraction index: Non-applicable *

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

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:

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

10.2 Chemical stability:

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

10.3 Possibility of hazardous reactions:

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

10.4 Conditions to avoid:

Applicable for handling and storage at room temperature:

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

10.5 Incompatible materials:

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

10.6 Hazardous decomposition products:

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

SECTION 11: TOXICOLOGICAL INFORMATION **

11.1 Information on toxicological effects:

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

Dangerous health implications:

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

A- Ingestion (acute effect):

- Acute toxicity : Based on available data, the classification criteria are not met, 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, as it does not contain substances classified as dangerous for inhalation. For more information see section 3.
- Corrosivity/Irritability: Based on available data, the classification criteria are not met. However, it does contain substances classified as dangerous for this effect. For more information see section 3.

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

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

** Changes with regards to the previous version

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SECTION 11: TOXICOLOGICAL INFORMATION ** (continued)

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

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

E- Sensitizing effects:

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

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

Based on available data, the classification criteria are not met. However, it contains substances classified as dangerous for inhalation. For more information see section 3.

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

H- Aspiration hazard:

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

Other information:

Non-applicable

Specific toxicology information on the substances:

Identification	Acute toxicity		Genus
	LD50 oral	LD50 dermal	
1,3-dioxolane CAS: 646-06-0 EC: 211-463-5	LD50 oral	5200 mg/kg	Rat
	LD50 dermal	15000 mg/kg	Rat
	LC50 inhalation	20650 mg/L (4 h)	Rat
Dimethoxymethane CAS: 109-87-5 EC: 203-714-2	LD50 oral	6423 mg/kg	Rat
	LD50 dermal	5500 mg/kg	Rabbit
	LC50 inhalation	>20 mg/L (4 h)	
Ammonia = 25 %, aqueous solution CAS: 1336-21-6 EC: Non-applicable	LD50 oral	>2000 mg/kg	
	LD50 dermal	>2000 mg/kg	
	LC50 inhalation	>20 mg/L (4 h)	
Hydrocarbons, C9-C11,n-alkanes, iso-alkanes, cyclics, <2% aromatics CAS: 64742-48-9 EC: 919-857-5	LD50 oral	5100 mg/kg	Rat
	LD50 dermal	>2000 mg/kg	
	LC50 inhalation	>20 mg/L (4 h)	
Butane CAS: 106-97-8 EC: 203-448-7	LD50 oral	>2000 mg/kg	
	LD50 dermal	>2000 mg/kg	
	LC50 inhalation	658 mg/L (4 h)	Rat
Propane CAS: 74-98-6 EC: 200-827-9	LD50 oral	>2000 mg/kg	
	LD50 dermal	>2000 mg/kg	
	LC50 inhalation	>5 mg/L (4 h)	
Isobutane CAS: 75-28-5 EC: 200-857-2	LD50 oral	>2000 mg/kg	
	LD50 dermal	>2000 mg/kg	
	LC50 inhalation	>5 mg/L	

** Changes with regards to the previous version

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SECTION 12: ECOLOGICAL INFORMATION **

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

12.1 Toxicity:

Identification	Acute toxicity		Species	Genus
1,3-dioxolane CAS: 646-06-0 EC: 211-463-5	LC50	12000 mg/L (96 h)	Cyprionodon variegatus	Fish
	EC50	6500 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	Non-applicable		
Dimethoxymethane CAS: 109-87-5 EC: 203-714-2	LC50	6990 mg/L (96 h)	Pimephales promelas	Fish
	EC50	Non-applicable		
	EC50	Non-applicable		
Ammonia = 25 %, aqueous solution CAS: 1336-21-6 EC: Non-applicable	LC50	0.89 mg/L (96 h)	Oncorhynchus mykiss	Fish
	EC50	101 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	Non-applicable		

12.2 Persistence and degradability:

Identification	Degradability		Biodegradability	
Hydrocarbons, C9-C11,n-alkanes, iso-alkanes, cyclics, <2% aromatics CAS: 64742-48-9 EC: 919-857-5	BOD5	Non-applicable	Concentration	Non-applicable
	COD	Non-applicable	Period	28 days
	BOD5/COD	Non-applicable	% Biodegradable	80 %

12.3 Bioaccumulative potential:

Identification	Bioaccumulation potential	
1,3-dioxolane CAS: 646-06-0 EC: 211-463-5	BCF	3
	Pow Log	-0.37
	Potential	Low
Butane CAS: 106-97-8 EC: 203-448-7	BCF	33
	Pow Log	2.89
	Potential	Moderate
Propane CAS: 74-98-6 EC: 200-827-9	BCF	13
	Pow Log	2.86
	Potential	Low
Ammonia = 25 %, aqueous solution CAS: 1336-21-6 EC: Non-applicable	BCF	
	Pow Log	-0.64
	Potential	
Isobutane CAS: 75-28-5 EC: 200-857-2	BCF	27
	Pow Log	2.76
	Potential	Low

12.4 Mobility in soil:

Identification	Absorption/desorption		Volatility	
1,3-dioxolane CAS: 646-06-0 EC: 211-463-5	Koc	15	Henry	2,48 Pa·m ³ /mol
	Conclusion	Very High	Dry soil	Yes
	Surface tension	Non-applicable	Moist soil	Yes
Butane CAS: 106-97-8 EC: 203-448-7	Koc	900	Henry	96258,75 Pa·m ³ /mol
	Conclusion	Low	Dry soil	Yes
	Surface tension	1,187E-2 N/m (25 °C)	Moist soil	Yes
Dimethoxymethane CAS: 109-87-5 EC: 203-714-2	Koc	Non-applicable	Henry	Non-applicable
	Conclusion	Non-applicable	Dry soil	Non-applicable
	Surface tension	2,079E-2 N/m (25 °C)	Moist soil	Non-applicable
Propane CAS: 74-98-6 EC: 200-827-9	Koc	460	Henry	71636,78 Pa·m ³ /mol
	Conclusion	Moderate	Dry soil	Yes
	Surface tension	7,02E-3 N/m (25 °C)	Moist soil	Yes

** Changes with regards to the previous version



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SECTION 12: ECOLOGICAL INFORMATION ** (continued)

Identification	Absorption/desorption		Volatility	
Isobutane	Koc	35	Henry	120576,75 Pa·m ³ /mol
CAS: 75-28-5	Conclusion	Very High	Dry soil	Yes
EC: 200-857-2	Surface tension	9,84E-3 N/m (25 °C)	Moist soil	Yes

12.5 Results of PBT and vPvB assessment:

Product fails to meet PBT/vPvB criteria

12.6 Other adverse effects:

Not described

** Changes with regards to the previous version

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

Code	Description	Waste class (Regulation (EU) No 1357/2014)
	It is not possible to assign a specific code, as it depends on the intended use by the user	Dangerous

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

HP3 Flammable, HP5 Specific Target Organ Toxicity (STOT)/Aspiration Toxicity

Waste management (disposal and evaluation):

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

Regulations related to waste management:

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

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

SECTION 14: TRANSPORT INFORMATION **

Transport of dangerous goods by land:

With regard to ADR 2017 and RID 2017:



- 14.1 UN number:** UN1950
14.2 UN proper shipping name: AEROSOLS, flammable
14.3 Transport hazard class(es): 2
Labels: 2.1
14.4 Packing group: N/A
14.5 Environmental hazards: No
14.6 Special precautions for user
Special regulations: 190, 327, 344, 625
Tunnel restriction code: D
Physico-Chemical properties: see section 9
Limited quantities: 1 L
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code: Non-applicable

Transport of dangerous goods by sea:

With regard to IMDG 38-16:

** Changes with regards to the previous version

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SECTION 14: TRANSPORT INFORMATION ** (continued)



- 14.1 UN number:** UN1950
- 14.2 UN proper shipping name:** AEROSOLS, flammable
- 14.3 Transport hazard class(es):** 2
Labels: 2.1
- 14.4 Packing group:** N/A
- 14.5 Environmental hazards:** No
- 14.6 Special precautions for user**
Special regulations: 190, 277, 327, 344, 63, 959
EmS Codes: F-D, S-U
Physico-Chemical properties: see section 9
Limited quantities: 1 L
Segregation group: Non-applicable
- 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:** Non-applicable

Transport of dangerous goods by air:

With regard to IATA/ICAO 2018:



- 14.1 UN number:** UN1950
- 14.2 UN proper shipping name:** AEROSOLS, flammable
- 14.3 Transport hazard class(es):** 2
Labels: 2.1
- 14.4 Packing group:** N/A
- 14.5 Environmental hazards:** No
- 14.6 Special precautions for user**
Physico-Chemical properties: see section 9
- 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:** Non-applicable

** Changes with regards to the previous version

SECTION 15: REGULATORY INFORMATION

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

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

Seveso III:

Section	Description	Lower-tier requirements	Upper-tier requirements
P3a		150	500

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

Shall not be used in:
—ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,
—tricks and jokes,
—games for one or more participants, or any article intended to be used as such, even with ornamental aspects.

Specific provisions in terms of protecting people or the environment:

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

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SECTION 15: REGULATORY INFORMATION (continued)

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:

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

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

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

- New declared substances
 - 1,3-dioxolane (646-06-0)
 - Butane (106-97-8)
 - Dimethoxymethane (109-87-5)
 - Propane (74-98-6)
 - Isobutane (75-28-5)

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

- Precautionary statements

TRANSPORT INFORMATION (SECTION 14):

- UN number
- Packing group

Texts of the legislative phrases mentioned in section 2:

H222: Extremely flammable aerosol

H315: Causes skin irritation

H319: Causes serious eye irritation

H229: Pressurised container: May burst if heated

Texts of the legislative phrases mentioned in section 3:

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

CLP Regulation (EC) No 1272/2008:

Acute Tox. 4: H302 - Harmful if swallowed

Aquatic Acute 1: H400 - Very toxic to aquatic life

Asp. Tox. 1: H304 - May be fatal if swallowed and enters airways

Flam. Gas 1: H220 - Extremely flammable gas

Flam. Liq. 2: H225 - Highly flammable liquid and vapour

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

Press. Gas: H280 - Contains gas under pressure, may explode if heated

Skin Corr. 1B: H314 - Causes severe skin burns and eye damage

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:

Aerosol 1: Calculation method

Skin Irrit. 2: Calculation method

Eye Irrit. 2: Calculation method

Aerosol 1: Calculation method

Advice related to training:

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

Principal bibliographical sources:

<http://echa.europa.eu>

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

Abbreviations and acronyms:

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

IMDG: International maritime dangerous goods code

IATA: International Air Transport Association

ICAO: International Civil Aviation Organisation

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SECTION 16: OTHER INFORMATION (continued)

ICAO: International Civil Aviation Organisation
COD: Chemical Oxygen Demand
BOD5: 5-day biochemical oxygen demand
BCF: Bioconcentration factor
LD50: Lethal Dose 50
LC50: Lethal Concentration 50
EC50: Effective concentration 50
Log-POW: Octanol-water partition coefficient
Koc: Partition coefficient of organic carbon

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 -