SPRAY DO NAPEŁNIANIA

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

1.1 Product identifier: SPRAY DO NAPEŁNIANIA

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

Relevant uses: Paint in aerosol.

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 Spólka 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 Dam. 1: Serious eye damage, Category 1, H318
Skin Irrit. 2: Skin irritation, Category 2, H315
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:

H222 - Extremely flammable aerosol
H229 - Pressurised container: May burst if heated
H315 - Causes skin irritation
H318 - Causes serious eye damage
H336 - May cause drowsiness or dizziness

Precautionary statements:

P101: If medical advice is needed, have product container or label at hand
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
P260: Do not breathe dust/fume/gas/mist/vapours/spray
P271: Use only outdoors or in a well-ventilated area
P280: Wear protective gloves/protective clothing/eye protection/face protection
P302+P352: IF ON SKIN: Wash with plenty of water
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P403: Store in a well-ventilated place
P410+P412: Protect from sunlight. Do no expose to temperatures exceeding 50 °C/122°F
P501: Dispose of contents/container in accordance with regulations on hazardous waste or packaging and packaging waste respectively

Supplementary information:

EUH066: Repeated exposure may cause skin dryness or cracking

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SECTION 2: HAZARDS IDENTIFICATION (continued)

2.3 Other hazards:

Product fails to meet PBT/vPvB criteria

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance:

Non-applicable

3.2 Mixture:

Chemical description: active ingredient mixture with a propellant. Extruding gas: dimethyl ether

Components:

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

Identification	Chemical name/Classification		Concentration
CAS: 115-10-6 EC: 204-065-8 Index: 603-019-00-8 REACH: 01-2119472128-37-XXXX	**Dimethyl ether**(1)	ATP CLP00	**50 - <75 %**
	Regulation 1272/2008	Flam. Gas 1: H220; Press. Gas: H280 - Danger	
CAS: 67-64-1 EC: 200-662-2 Index: 606-001-00-8 REACH: 01-2119471330-49-XXXX	**Acetone**(1)	ATP CLP00	**25 - <50 %**
	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	**2,5 - <10 %**
	Regulation 1272/2008	Flam. Liq. 3: H226; STOT SE 3: H336; EUH066 - Warning	
CAS: 71-36-3 EC: 200-751-6 Index: 603-004-00-6 REACH: 01-2119484630-38-XXXX	**1-butanol**(1)	Self-classified	**2,5 - <10 %**
	Regulation 1272/2008	Acute Tox. 4: H302; Eye Dam. 1: H318; Flam. Liq. 3: H226; Skin Irrit. 2: H315; STOT SE 3: H335; STOT SE 3: H336 - Danger	
CAS: 111-76-2 EC: 203-905-0 Index: 603-014-00-0 REACH: 01-2119475108-36-XXXX	**2-butoxyethanol**(1)	ATP CLP00	**1 - <2,5 %**
	Regulation 1272/2008	Acute Tox. 4: H302+H312+H332; Eye Irrit. 2: H319; Skin Irrit. 2: H315 - Warning	

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

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

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 lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, in which case this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.

By ingestion/aspiration:

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SECTION 4: FIRST AID MEASURES (continued)

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:

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 (CO_2). 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:

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

6.3 Methods and material for containment and cleaning up:

It is recommended:

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

6.4 Reference to other sections:

See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:

A.- Precautions for safe manipulation

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

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

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SECTION 7: HANDLING AND STORAGE (continued)

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.

C.- Technical recommendations to prevent ergonomic and toxicological risks

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

D.- Technical recommendations to prevent environmental risks

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

7.2 Conditions for safe storage, including any incompatibilities:

A.- Technical measures for storage

Minimum Temp.: 5 ºC

Maximum Temp.: 20 ºC

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		
Dimethyl ether	IOELV (8h)	1000 ppm	1920 mg/m³
CAS: 115-10-6 EC: 204-065-8	IOELV (STEL)		
Acetone	IOELV (8h)	500 ppm	1210 mg/m³
CAS: 67-64-1 EC: 200-662-2	IOELV (STEL)		
2-butoxyethanol	IOELV (8h)	20 ppm	98 mg/m³
CAS: 111-76-2 EC: 203-905-0	IOELV (STEL)	50 ppm	246 mg/m³

DNEL (Workers):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Dimethyl ether	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
CAS: 115-10-6	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
EC: 204-065-8	Inhalation	Non-applicable	Non-applicable	1879 - 1909 mg/m³	Non-applicable
Acetone	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
CAS: 67-64-1	Dermal	Non-applicable	Non-applicable	171 - 201 mg/kg	Non-applicable
EC: 200-662-2	Inhalation	Non-applicable	2405 - 2435 mg/m³	1195 - 1225 mg/m³	Non-applicable
N-butyl acetate	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
CAS: 123-86-4	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
EC: 204-658-1	Inhalation	945 - 975 mg/m³	945 - 975 mg/m³	465 - 495 mg/m³	465 - 495 mg/m³
1-butanol	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
CAS: 71-36-3	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
EC: 200-751-6	Inhalation	Non-applicable	Non-applicable	Non-applicable	295 - 325 mg/m³
2-butoxyethanol	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
CAS: 111-76-2	Dermal	74 - 104 mg/kg	Non-applicable	60 - 90 mg/kg	Non-applicable
EC: 203-905-0	Inhalation	648 - 678 mg/m³	231 - 261 mg/m³	83 - 113 mg/m³	Non-applicable

DNEL (General population):

- CONTINUED ON NEXT PAGE -

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Dimethyl ether	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
CAS: 115-10-6	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
EC: 204-065-8	Inhalation	Non-applicable	Non-applicable	456 - 486 mg/m³	Non-applicable
Acetone	Oral	Non-applicable	Non-applicable	47 - 77 mg/kg	Non-applicable
CAS: 67-64-1	Dermal	Non-applicable	Non-applicable	47 - 77 mg/kg	Non-applicable
EC: 200-662-2	Inhalation	Non-applicable	Non-applicable	185 - 215 mg/m³	Non-applicable
N-butyl acetate	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
CAS: 123-86-4	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
EC: 204-658-1	Inhalation	844,7 - 874,7 mg/m³	844,7 - 874,7 mg/m³	87,34 - 117,34 mg/m³	87,34 - 117,34 mg/m³
1-butanol	Oral	Non-applicable	Non-applicable	-11,88 - 18,13 mg/kg	Non-applicable
CAS: 71-36-3	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
EC: 200-751-6	Inhalation	Non-applicable	Non-applicable	Non-applicable	40 - 70 mg/m³
2-butoxyethanol	Oral	-1,6 - 28,4 mg/kg	Non-applicable	-11,8 - 18,2 mg/kg	Non-applicable
CAS: 111-76-2	Dermal	29,5 - 59,5 mg/kg	Non-applicable	23 - 53 mg/kg	Non-applicable
EC: 203-905-0	Inhalation	411 - 441 mg/m³	108 - 138 mg/m³	34 - 64 mg/m³	Non-applicable

PNEC:

Identification				
Dimethyl ether	STP	145 - 175 mg/L	Fresh water	-14,85 - 15,16 mg/L
CAS: 115-10-6	Soil	-14,96 - 15,05 mg/kg	Marine water	-14,98 - 15,02 mg/L
EC: 204-065-8	Intermittent	-13,45 - 16,55 mg/L	Sediment (Fresh water)	-14,32 - 15,68 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	-14,93 - 15,07 mg/kg
Acetone	STP	85 - 115 mg/L	Fresh water	-4,4 - 25,6 mg/L
CAS: 67-64-1	Soil	14,5 - 44,5 mg/kg	Marine water	-13,94 - 16,06 mg/L
EC: 200-662-2	Intermittent	6 - 36 mg/L	Sediment (Fresh water)	15,4 - 45,4 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	-11,96 - 18,04 mg/kg
N-butyl acetate	STP	20,6 - 50,6 mg/L	Fresh water	-14,82 - 15,18 mg/L
CAS: 123-86-4	Soil	-14,91 - 15,09 mg/kg	Marine water	-14,98 - 15,02 mg/L
EC: 204-658-1	Intermittent	-14,64 - 15,36 mg/L	Sediment (Fresh water)	-14,02 - 15,98 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	-14,9 - 15,1 mg/kg
1-butanol	STP	2461 - 2491 mg/L	Fresh water	-14,92 - 15,08 mg/L
CAS: 71-36-3	Soil	-14,99 - 15,02 mg/kg	Marine water	-14,99 - 15,01 mg/L
EC: 200-751-6	Intermittent	-12,75 - 17,25 mg/L	Sediment (Fresh water)	-14,82 - 15,18 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	-14,98 - 15,02 mg/kg
2-butoxyethanol	STP	448 - 478 mg/L	Fresh water	-6,2 - 23,8 mg/L
CAS: 111-76-2	Soil	-11,87 - 18,13 mg/kg	Marine water	-14,12 - 15,88 mg/L
EC: 203-905-0	Intermittent	-5,9 - 24,1 mg/L	Sediment (Fresh water)	19,6 - 49,6 mg/kg
	Oral	5 - 35 g/kg	Sediment (Marine water)	Non-applicable

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

- CONTINUED ON NEXT PAGE -

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory respiratory tract protection	Filter mask for gases and vapours	CE 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	NON-disposable chemical protective gloves	CE CAT III	EN 374-1:2003 EN 374-3:2003/AC:2006 EN 420:2003+A1:2009	The Breakthrough Time indicated by the manufacturer must exceed the period during which the product is being used. Do not use protective creams after the product has come into contact with skin.

"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	Face shield	CE CAT II	EN 166:2001 EN 167:2001 EN 168:2001 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	Disposable clothing for protection against chemical risks, with antistatic and fireproof properties	CE CAT III	EN 1149-1,2,3 EN 13034:2005+A1:2009 EN ISO 13982-1:2004/A1:2010 EN ISO 6529:2001 EN ISO 6530:2005 EN ISO 13688:2013 EN 464:1994	For professional use only. Clean periodically according to the manufacturer´s instructions.

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

Volatile organic compounds:

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

V.O.C. (Supply): 100 % weight

V.O.C. density at 20 ºC: 722 kg/m³ (722 g/L)

Average carbon number: 3,76

Average molecular weight: 72,32 g/mol

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

For complete information see the product datasheet.

*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)

Appearance:	
Physical state at 20 ºC:	Liquid
Appearance:	Emulsion
Colour:	Characteristic
Odour:	Characteristic
Odour threshold:	Non-applicable *
Volatility:	
Boiling point at atmospheric pressure:	-24 ºC
Vapour pressure at 20 ºC:	520000 Pa
Vapour pressure at 50 ºC:	Non-applicable *
Evaporation rate at 20 ºC:	Non-applicable *
Product description:	
Density at 20 ºC:	722 kg/m³
Relative density at 20 ºC:	0,722
Dynamic viscosity at 20 ºC:	Non-applicable *
Kinematic viscosity at 20 ºC:	Non-applicable *
Kinematic viscosity at 40 ºC:	Non-applicable *
Concentration:	Non-applicable *
pH:	Non-applicable *
Vapour density at 20 ºC:	Non-applicable *
Partition coefficient n-octanol/water 20 ºC:	Non-applicable *
Solubility in water at 20 ºC:	Non-applicable *
Solubility properties:	Insoluble in water
Decomposition temperature:	Non-applicable *
Melting point/freezing point:	Non-applicable *
Explosive properties:	Non-applicable *
Oxidising properties:	Non-applicable *
Flammability:	
Flash Point:	-42 ºC
Flammability (solid, gas):	Non-applicable *
Autoignition temperature:	Non-applicable *
Lower flammability limit:	1,1 % Volume
Upper flammability limit:	18,6 % Volume
Explosive:	
Lower explosive limit:	Non-applicable *
Upper explosive limit:	Non-applicable *

9.2 Other information:

Surface tension at 20 ºC:	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.

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SECTION 10: STABILITY AND REACTIVITY (continued)

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	Combustive 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

Contains glycols. It is recommended not to breathe the vapours for prolonged periods of time due to the possibility of effects that are hazardous to the health .

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 dangerous for inhalation. For more information see section 3.
- Corrosivity/Irritability: 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.

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

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

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

- Carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for the effects mentioned. For more information see section 3.
  IARC: 2-butoxyethanol (3)
- Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
- Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

E- Sensitizing effects:

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

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

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

Exposure in high concentration can interfere with the central nervous system causing headache, dizziness, vertigo, nausea, vomiting, confusion, and in serious cases, loss of consciousness.

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, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
- Skin: Repeated exposure may cause skin dryness or cracking

H- Aspiration hazard:

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

Other information:

Non-applicable

Specific toxicology information on the substances:

Identification	Acute toxicity		Genus
Dimethyl ether	LD50 oral	>2000 mg/kg	
CAS: 115-10-6	LD50 dermal	>2000 mg/kg	
EC: 204-065-8	LC50 inhalation	308,5 mg/L (4 h)	Rat
Acetone	LD50 oral	5800 mg/kg	Rat
CAS: 67-64-1	LD50 dermal	7426 mg/kg	Rabbit
EC: 200-662-2	LC50 inhalation	76 mg/L (4 h)	Rat
N-butyl acetate	LD50 oral	12789 mg/kg	Rat
CAS: 123-86-4	LD50 dermal	14112 mg/kg	Rabbit
EC: 204-658-1	LC50 inhalation	23,4 mg/L (4 h)	Rat
1-butanol	LD50 oral	2292 mg/kg	Rat
CAS: 71-36-3	LD50 dermal	3400 mg/kg	Rabbit
EC: 200-751-6	LC50 inhalation	24,66 mg/L (4 h)	Rat
2-butoxyethanol	LD50 oral	1414 mg/kg	Rat
CAS: 111-76-2	LD50 dermal	1060 mg/kg	Rabbit
EC: 203-905-0	LC50 inhalation	11 mg/L (4 h)	Rat

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
Acetone	LC50	5540 mg/L (96 h)	Oncorhynchus mykiss	Fish
CAS: 67-64-1	EC50	23.5 mg/L (48 h)	Daphnia magna	Crustacean
EC: 200-662-2	EC50	3400 mg/L (48 h)	Chlorella pyrenoidosa	Algae
N-butyl acetate	LC50	62 mg/L (96 h)	Leuciscus idus	Fish
CAS: 123-86-4	EC50	73 mg/L (24 h)	Daphnia magna	Crustacean
EC: 204-658-1	EC50	675 mg/L (72 h)	Scenedesmus subspicatus	Algae
1-butanol	LC50	1740 mg/L (96 h)	Pimephales promelas	Fish
CAS: 71-36-3	EC50	1983 mg/L (48 h)	Daphnia magna	Crustacean
EC: 200-751-6	EC50	500 mg/L (96 h)	Scenedesmus subspicatus	Algae
2-butoxyethanol	LC50	1490 mg/L (96 h)	Lepomis macrochirus	Fish
CAS: 111-76-2	EC50	1815 mg/L (48 h)	Daphnia magna	Crustacean
EC: 203-905-0	EC50	911 mg/L (72 h)	Pseudokirchneriella subcapitata	Algae

12.2 Persistence and degradability:

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SECTION 12: ECOLOGICAL INFORMATION (continued)

Identification	Degradability		Biodegradability	
Acetone	BOD5	Non-applicable	Concentration	100 mg/L
CAS: 67-64-1	COD	Non-applicable	Period	28 days
EC: 200-662-2	BOD5/COD	0.96	% Biodegradable	96 %
N-butyl acetate	BOD5	Non-applicable	Concentration	Non-applicable
CAS: 123-86-4	COD	Non-applicable	Period	5 days
EC: 204-658-1	BOD5/COD	0.79	% Biodegradable	84 %
1-butanol	BOD5	1.71 g O2/g	Concentration	Non-applicable
CAS: 71-36-3	COD	2.46 g O2/g	Period	19 days
EC: 200-751-6	BOD5/COD	0.69	% Biodegradable	98 %
2-butoxyethanol	BOD5	0.71 g O2/g	Concentration	100 mg/L
CAS: 111-76-2	COD	2.2 g O2/g	Period	14 days
EC: 203-905-0	BOD5/COD	0.32	% Biodegradable	96 %

12.3 Bioaccumulative potential:

Identification	Bioaccumulation potential	
Acetone	BCF	1
CAS: 67-64-1	Pow Log	-0.24
EC: 200-662-2	Potential	Low
N-butyl acetate	BCF	4
CAS: 123-86-4	Pow Log	1.78
EC: 204-658-1	Potential	Low
1-butanol	BCF	1
CAS: 71-36-3	Pow Log	0.88
EC: 200-751-6	Potential	Low
2-butoxyethanol	BCF	3
CAS: 111-76-2	Pow Log	0.83
EC: 203-905-0	Potential	Low

12.4 Mobility in soil:

Identification	Absorption/desorption		Volatility	
Dimethyl ether	Koc	Non-applicable	Henry	Non-applicable
CAS: 115-10-6	Conclusion	Non-applicable	Dry soil	Non-applicable
EC: 204-065-8	Surface tension	1,136E-2 N/m (25 ºC)	Moist soil	Non-applicable
Acetone	Koc	1	Henry	2,93 Pa·m³/mol
CAS: 67-64-1	Conclusion	Very High	Dry soil	Yes
EC: 200-662-2	Surface tension	2,304E-2 N/m (25 ºC)	Moist soil	Yes
N-butyl acetate	Koc	Non-applicable	Henry	Non-applicable
CAS: 123-86-4	Conclusion	Non-applicable	Dry soil	Non-applicable
EC: 204-658-1	Surface tension	2,478E-2 N/m (25 ºC)	Moist soil	Non-applicable
1-butanol	Koc	2.44	Henry	5,39E-2 Pa·m³/mol
CAS: 71-36-3	Conclusion	Very High	Dry soil	Yes
EC: 200-751-6	Surface tension	2,567E-2 N/m (25 ºC)	Moist soil	Yes
2-butoxyethanol	Koc	8	Henry	1,621E-1 Pa·m³/mol
CAS: 111-76-2	Conclusion	Very High	Dry soil	No
EC: 203-905-0	Surface tension	2,729E-2 N/m (25 ºC)	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

SECTION 13: DISPOSAL CONSIDERATIONS

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SECTION 13: DISPOSAL CONSIDERATIONS (continued)

13.1 Waste treatment methods:

Code	Description	Waste class (Regulation (EU) No 1357/2014)
16 05 04*	gases in pressure containers (including halons) containing hazardous substances	Dangerous

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

HP3 Flammable, HP4 Irritant — skin irritation and eye damage, 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:

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:

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SECTION 14: TRANSPORT INFORMATION (continued)

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

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 ....):

Regulation (EU) No 98/2013 of the European Parliament and of the Council of 15 January 2013 on the marketing and use of explosives precursors: Contains Acetone. Product under the provisions of Article 9
Shall not be used in:
—ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,
—tricks and jokes,
—games for one or more participants, or any article intended to be used as such, even with ornamental aspects.

Specific provisions in terms of protecting people or the environment:

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

Other legislation:

The product could be affected by sectorial legislation

15.2 Chemical safety assessment:

The supplier has not carried out evaluation of chemical safety.

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.:

Non-applicable

Texts of the legislative phrases mentioned in section 2:

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SECTION 16: OTHER INFORMATION (continued)

H222: Extremely flammable aerosol
H315: Causes skin irritation
H318: Causes serious eye damage
H336: May cause drowsiness or dizziness
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
Acute Tox. 4: H302+H312+H332 - Harmful if swallowed, in contact with skin or if inhaled
Eye Dam. 1: H318 - Causes serious eye damage
Eye Irrit. 2: H319 - Causes serious eye irritation
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 Irrit. 2: H315 - Causes skin irritation
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 Dam. 1: Calculation method
STOT SE 3: 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
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

- END OF SAFETY DATA SHEET -