

# SAFETY DATA SHEET

## COMPRESSED AIR

Revision: 22.02.2023

VERSION : 1.0/EN

in accordance the Commission Regulation (EU) No **2020/878** of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

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

#### 1.1 Product identifier

**COMPRESSED AIR**

**UFI: WM00-G0SR-K00U-FDGH**

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

Identified uses: High pressure compressed gas for removing dust and dirt from electronic and office equipment  
SU3 Industrial uses

SU21 Professional uses

Uses advised against: . Every way of using not mentioned above or in the point 7.3.

#### 1.3 Details of the supplier of the safety data sheet

**Micro Chip Elektronic Barbara Kaczmarczyk**

ul. Kochanowskiego 9

40-035 Katowice, poland

Telephone number. +48 503 017 712

e-mail (competent person): info@micro-chip.pl

#### 1.4 Emergency telephone number

Nationwide emergency telephones (**Mon-Fri 9:00 – 15:00; English**) **+48 503 017 712** Only available during office hours.

112 (emergency telephone number). 998 (Fire Brigade), 999 (Medical Rescue Service)

Emergency telephone number				
Country	Official advisory body	Address	Emergency number	Remark
Austria	Vergiftungsinformationszentrale (Poisons Information Centre)	Stubenring 6 1010 Wien	+43 1 406 43 43	
Belgium	Centre Anti-Poisons/ Antigifcentrum c/o Hôpital Central de la Base – Reine Astrid	Rue Bruyn 1 B -1120 Bruxelles/Brussel	+32 70 245 245	Please dial: 070 245245 for any urgent questions about intoxication (free of charge 24/7), if not accessible, dial: 02 264 96 30 (standard fee)
Bulgaria	Национален токсикологичен информационен център (National Toxicological Information Centre) Многопрофилна болница за активно лечение и спешна медицина "Н.И.Пирогов" (National Clinical Toxicology Centre), Emergency Medical Institute "Pirogov"	21 Totleben Boulevard 1606 SOFIA	+359 2 9154 409	
Croatia	Centar za kontrolu otrovanja Institut za medicinska istraživanja i medicinu rada	Ksaverska Cesta 2 p.p. 291 10000 Zagreb	+385 1 234 8342	
Cyprus	Κέντρου Δηλητηριάσεων		1401	Operating hours 24 hours / 24 hours, 7 days a week
Czech Republic	Toxikologické informační středisko Klinicko-pracovního lékařství VFN a 1. LF UK	Na Bojišti 1 120 00 Praha 2	+420 224 919 293 +420 224 915 402	
Denmark	Giftlinjen Bispebjerg Hospital	Bispebjerg Bakke 23 2400 København NV	+45 82 12 12 12	
Estonia	Mürgistusteabekeskus	Gonsiori 29 15027 Tallinn	16662 +372 626 93 90	
Finland	Myrkytystietokeskus	Stenbäckinkatu 9 PO BOX 100 29 Helsinki	+358 9 471 977 +358 9 471 1	
France	Centre Antipoison et de Toxicovigilance de Paris Hôpital Fernand Widal	200 rue du Faubourg Saint-Denis 75475 Paris Cedex 10	+33 1 40 05 48 48	
France	Centre Antipoison et de Toxicovigilance de Marseille Hôpital Sainte Marguerite	270 boulevard de Sainte Marguerite 13274 Marseille Cedex 09	+33 4 91 75 25 25	
Germany	Giftnotruf München Toxikologische Abteilung der II. Med. Klinik und Poliklinik rechts der Isar der Technischen Universität München	Ismaninger Straße 22 81675 München	+49 (0) 89 19240	
Germany	Giftnotruf der Charité CBF, Haus VIII (Wirtschaftsgebäude), UG	Hindenburgdamm 30 12203 Berlin	+49 (0) 30 19240	
Greece	Poisons Information Centre Children's Hospital P&A Kyriakou	11762 Athens	+30 2 10 779 3777	

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Hungary	Országos Kémiai Biztonsági Intézet Egészségügyi Toxikológiai Tájékoztató Szolgálat	Nagyvárad tér 2. 1437 Budapest, Pf. 839 1097 Budapest	+36 80 20 11 99	
Iceland	Eitrunarmiðstöð Landspítali	Fossvogi 108 Reykjavík	+354 543 22 22	
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 (Healthcare professionals- 24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	
Italy	Centro Antiveleni Dipartimento di Tossicologia Clinica, Università Cattolica del Sacro Cuore	Largo Agostino Gemelli 8 168 Roma	+39 06 305 4343	
Latvia	Valsts Toksikoloģijas centrs, Saindēšanās un zāļu informācijas centrs	Hipokrāta 2 1038 Rīga	+371 67 04 24 73	
Lithuania	Apsinuodijimų informacijos biuras	Birutės g. 56 8110 Vilnius	+370 5 236 20 52 +370 687 53378	
Luxembourg	Centre Anti-Poisons/ Antigifcentrum c/o Hôpital Central de la Base - Reine Astrid	Rue Bruyn 1 1120 Bruxelles/Brussel	+352 8002 5500	
Malta	Medicines & Poisons Info Office	Mater Dei Hospital MSD Msida	+356 2545 6504	
Netherlands	Nationaal Vergiftigingen Informatie Centrum Universitair Medisch Centrum Utrecht, Het Nationaal Vergiftigingen Informatie Centrum (NVIC) informeert (dieren-) artsen, apothekers en andere professionele hulpverleners over de mogelijke gezondheidseffecten en behandelingsmogelijkheden bij vergiftigingen. Het NVIC is hiervoor dag en nacht bereikbaar, zowel telefonisch als via internet	Huispostnummer B.00.118 PO Box 85500 3508 GA Utrecht	+31 30 274 88 88	Only for the purpose of informing medical personnel in cases of acute intoxications
Norway	Giftinformasjonen Helsedirektoratet	P.O. Box 7000 St. Olavs Plass 130 Oslo	+47 22 591300	
Poland	National Poisons Information Centre The Nofer Institute of Occupational Medicine (Łódź)	ul. Teresy 8 P.O. BOX 199 90950 Łódź	+48 42 63 14 724	
Portugal	Centro de Informação Antivenenos Instituto Nacional de Emergência Médica	Rua Almirante Barroso, 36 1000-013 Lisboa	+351 808 250 143	
Romania	Department of Clinical Toxicology Spitalul de Urgenta Floreasca	Calea Floreasca Bucuresti	+40 21 230 8000	
Serbia	Nacionalni centar za kontrolu trovanja - VMA	Crnotravska 17 11000 Beograd	+381 11 360 84 40 (24h) +381 11 3672 187	
Slovakia	Národné toxikologické informačné centrum Univerzitná nemocnica Bratislava, pracovisko Kramáre, Klinikapracovné hokekárstva a toxikológie	Limbová 5 833 05 Bratislava	+421 2 54 77 41 66	
Slovenia	Center za kliničnotoksikologijo in farmakologijo Internaklinika, UKCL	Zaloška cesta 7 1525 Ljubljana	+386 41 650 500	
Spain	Servicio de Información Toxicológica Instituto Nacional de Toxicología y Ciencias Forenses, Departamento de Sevilla	Carretera de San Jerónimo Km 0,4 41080 Sevilla	+34 91 562 04 20	(Toxicological emergencies only). Information in Spanish (24/7)
Sweden	Giftinformationscentralen	Box 60 500 171 76 Stockholm	112 – begär Giftinformation +46 10 456 6700 (Från utlandet)	(from abroad: +41 44 251 51 51) non urgent inquiry: +41 44 251 66 66
Switzerland	Tox Info Suisse	Freiestrasse 16 8032 Zürich	145	

## 2 SECTION 2: HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

#### **Classification according to Regulation (EC) No 1272/2008**

Physical and chemical hazards:

#### **Flammable aerosols, Hazard Category 1 [Aerosol 1]**

Extremely flammable aerosol. Pressurised container: May burst if heated (H222-H229)

Health hazards

As a gas heavier than air, it accumulates in the lower areas of rooms, which can lead to loss of consciousness and suffocation due to local lack of oxygen. Inhalation of high concentration gas may cause nausea, headaches and

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dizziness, irregular heartbeat. Prolonged exposure to gas vapors may adversely affect the central nervous system. As with all liquefied gases, contact with rapidly evaporating liquid may cause burns (frostbite) to the skin and eyes.

#### Environmental hazards:

This mixture does not present an environmental hazard. No known or foreseeable environmental damage under standard conditions of use.

### 2.2 Label elements

#### Labelling according Regulation (EC) No 1272/2008

**Pictogram** \*\*



**GHS02**

**GHS04**

**Signal word: Danger**

**Hazard statement(s)**

H222 Extremely flammable aerosol

H229 Pressurised container: May burst if heated

**Precautionary statement(s):**

Prevention:

P102 Keep out of reach of children.

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

P377 Leaking gas fire: Do not extinguish, unless leak can be stopped safely

P381 In case of leakage, eliminate all ignition sources.

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

P251 Do not pierce or burn, even after use

Storage:

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

**\*\* CAUTION : Derogations from labelling requirements for special cases CLP**

**1.3.2. Gas containers intended for propane, butane or liquefied petroleum gas (LPG)**

**1.3.2.1.** If propane, butane and liquefied petroleum gas or a mixture containing these substances classified in accordance with the criteria of this Annex, is placed on the market in closed refillable cylinders or in non-refillable cartridges within the scope of EN 417 as fuel gases which are only released for combustion (current edition of EN 417, relating to 'Non-refillable metallic gas cartridges for liquefied petroleum gases, with or without a valve, for use with portable appliances; construction, inspection, testing and marking'), these cylinders or cartridges need be labelled only with the appropriate pictogram and the hazard and precautionary statements concerning flammability.

### 2.3 Other hazards

The substances contained in the product do not meet criteria for PBT or vPvB in accordance with Annex XIII of REACH Regulation. The product does not contain substances included in the list established in accordance with Article 59 (1) for having endocrine disrupting properties, or substances identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 (3) or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 % by weight.

## 3 SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

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**3.1 Substances:**

Not applicable

**3.2 Mixtures:**

**Product identifier:** COMPRESSED AIR

Substance identifier	Name of the substance	Weight fraction %	Classification in line with The Regulation (EC) No. 1272/2008		
			Signal Word Code(s)	Hazard Class and Category Code(s)	Hazard Statement Code(s)
CAS No: 74-98-6 CE No: 200-827-9 Index No: 601-003-00-5 Reach No:	Propane [1]	30-40	GHS02 Dgr	Flam. Gas 1 Press Gas	H220 H280
CAS No: 106-97-8 CE No: 203-448-7 Index No: 601-004-00-0 Reach No:	Butane[ 1]	20-35	GHS02 Dgr	Flam. Gas 1 Press Gas	H220 H280
CAS No: 124-38-9 CE No: 204-696-9 Index No: Reach No:	Carbon dioxide [1]	5-10	---	Not Classified	---
CAS No: 75-28-5 CE No: 200-857-2 Index No: Reach No:	Isobutane	2-5	GHS02 Dgr	Flam. Gas 1 Press Gas	H220 H280

[1] Substance with exposure limit in the workplace

The product contains nitrogen in the amount of 5 - 10% nitrogen

Full H phrases are specified in point 16 hereof.

## 4 SECTION 4: FIRST AID MEASURES

**4.1 Description of first aid measures**

**Skin contact:** Pour cold water over the frostbitten part of the body, then remove contaminated clothing and rings, bracelets, watches, etc. If the clothing sticks to the skin permanently, do not remove it. Warm the frostbitten parts of the body slowly. Cover with a sterile dressing. Do not use ointments and creams. Note: Wet the contaminated clothing with water before removing

**Eye contact:** DO NOT DELAY. Obtain medical treatment immediately. Remove contact lenses if present and easy to do so. Continue rinsing. Flush eye with copious quantities of water.

**Ingestion:** This material is a gas under normal atmospheric conditions and ingestion is unlikely. If product is swallowed or gets in mouth, do NOT induce vomiting; wash mouth with water and give some water to drink. If symptoms develop, or if in doubt contact a Poisons Information Centre or a doctor.

**Inhalation:** Remove to fresh air. Keep warm and calm. Consult a doctor, if symptoms persist. Perform artificial respiration or give oxygen if needed. Consult a doctor, if disturbing symptoms occur.

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#### 4.2 **Most important symptoms and effects, both acute and delayed**

Higher concentrations may cause coughing, headaches and dizziness, nausea, breathing disorders, sometimes psychomotor disorders, weakness, pain behind the sternum, drowsiness, memory disorders, nervousness. At high concentrations, loss of consciousness, convulsions, paralysis of the respiratory center may occur. As a gas heavier than air, it accumulates in the lower areas of rooms, which can lead to loss of consciousness and suffocation due to local lack of oxygen. As with all liquefied gases, contact with rapidly evaporating liquid may cause burns (frostbite) to the skin and eyes.

#### 4.3 **Indication of any immediate medical attention and special treatment needed**

In case of contact with the product in liquid form, proceed as in the case of frostbite. Do not give anything by mouth to an unconscious person and do not induce vomiting. Provide the safety data sheet (SDS) to the attending physician

### 5 SECTION 5: FIREFIGHTING MEASURES

#### 5.1 **Extinguishing media**

Suitable extinguishing media:

Dry chemical, vapour or carbon dioxide is recommended. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces.

Unsuitable extinguishing media:

Jet water.

#### 5.2 **Special hazards arising from the substance or mixture**

Extremely flammable gas. Released from the tank, it evaporates quickly. Forms explosive mixtures with air. Closed vessels/tanks exposed to fire or high temperatures may explode due to the increase of pressure inside them. In a fire environment, carbon oxides are formed, During combustion harmful fumes consisting of carbon oxides and other harmful products of thermal decomposition may be produced. Do not inhale combustion products, it may cause health risk.

#### 5.3 **Advice for firefighters**

Vapors form flammable and explosive mixtures with air, are heavier than air and accumulate near the ground and in the lower parts of rooms. If a closed container is heated, there is a risk of pressure build-up and bursting of the package. Cool the containers exposed to fire from a safe distance with a diffused stream of water; if possible, remove them from the endangered area. Wear gas-tight, protective clothing and self-contained breathing apparatus

### 6 SECTION 6: ACCIDENTAL RELEASE MEASURES

#### 6.1 **Personal precautions, protective equipment and emergency procedures**

Remove all sources of ignition - put out open fire, announce a ban on smoking and using sparking tools, protect containers against heating (risk of explosion). Do not enter the hazardous area.

Avoid direct contact with escaping gas. Do not inhale the gas. Ensure effective ventilation. Wear protective clothing and equipment (see section 8).

CAUTION: Explosion hazardous area. Gas heavier than air, may travel along floor/ground to distant sources of ignition and pose a flashback hazard. To ensure safe working conditions, the gas concentration must be checked before allowing personnel to enter.

Notify the people in surrounding area about the failure; remove from the hazard area all persons who are not involved in the liquidation of the failure, order evacuation if necessary; call rescue teams.

#### 6.2 **Environmental precautions**

Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities

#### 6.3 **Methods and material for containment and cleaning up**

Small amounts: If possible and safe, eliminate the leak (close the gas supply, seal it). Leave the small amount of the released liquefied gas to evaporate.

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Large amounts: Dilute large quantities of released gas with water spray. Place the damaged receptacle, if possible, in a hermetic emergency chamber

### 6.4 Reference to other sections

Appropriate conduct with waste product – section 13. Personal protection equipment – section 8.

## 7 SECTION 7: HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Handle in accordance with good occupational hygiene and safety practices. Avoid contact with skin and eyes. Do not inhale aerosol. Ensure adequate general and/or local ventilation. Eliminate sources of ignition - do not use open flames, do not smoke, do not use sparking tools and clothing from fabric susceptible to electrification; protect containers from heating. Do not spray on a naked flame or any incandescent material. Protect against electrostatic charges

### 7.2 Conditions for safe storage, including any incompatibilities

Vapors form flammable and explosive mixtures with air, are heavier than air and accumulate near the ground and in the lower parts of rooms. Store only in a cool, dry place. Keep aerosols away from sources of ignition or ambient temperatures above 50 ° Celsius. Keep away from sources of ignition and heat. Do not smoke, use open flame and sparking devices in a warehouse. Do not pierce or burn packaging even after use. Keep away from food, foodstuffs and animal feed. Avoid contact with strong oxidizing agents - contact may cause ignition. Avoid contact with steel corrosive agents - the risk of damage of the containers and the release of aerosols content.

### 7.3 Specific end use(s)

No information about uses other than mentioned in subsection 1.2

## 8 SECTION 8: EXPOSURE CONTROLS/ PERSONAL PROTECTION

### 8.1 Control parameters

<b>n-Butane [106-97-8]</b>				
	<b>Limit value - Eight hours</b>		<b>Limit value - Short term</b>	
	<b>Ppm</b>	<b>mg/m<sup>3</sup></b>	<b>ppm</b>	<b>mg/m<sup>3</sup></b>
Austria	800	1600	1600	3800
Belgium			980 (1)	2370 (1)
Denmark	500	1200	1000	2400
Finland	800	1900	1000 (1)	2400 (1)
France	800	1900		
Germany (AGS)	1000	2400	4000 (1)	9600 (1)
Germany (DFG)	1000	2400	4000 (1)	9600 (1)
Hungary		2350		9400 (1)
Ireland			1000 (1)	
Latvia		300		
Norway	250	600		
Poland		1900		3000
Spain	800	1935		
Switzerland	800	1900		
United Kingdom	600	1450	750	1810
<b>Remarks</b>				
Belgium	(1)	15 minutes average value		
Finland	(1)	15 minutes average value		

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Germany (AGS)	(1) 15 minutes average value			
Germany (DFG)	(1) 15 minutes average value			
Hungary	(1) 15 minutes average value			
<b>Propane [74-98-6]</b>				
	<b>Limit value - Eight hours</b>		<b>Limit value - Short term</b>	
	<b>ppm</b>	<b>mg/m<sup>3</sup></b>	<b>ppm</b>	<b>mg/m<sup>3</sup></b>
Austria	1000	1800	2000	3600
Belgium	1000			
Denmark	1000	1800	2000	3600
Finland	800	1500	1100 (1)	2000 (1)
Germany (AGS)	1000	1800	4000 (1)	7200 (1)
Germany (DFG)	1000	1800	4000 (1)	7200 (1)
Latvia	1000	1800		
Norway	500	900		
Poland		1800		
Romania	778	1400	1000 (1)	1800 (1)
Spain	1000			
Switzerland	1000	1800	4000	7200
<b>Remarks</b>				
Finland	(1) 15 minutes average value			
Germany (AGS)	(1) 15 minutes average value			
Germany (DFG)	(1) 15 minutes average value			
Romania	(1) 15 minutes average value			
<b>Iso-Butane [75-28-5]</b>				
	<b>Limit value - Eight hours</b>		<b>Limit value - Short term</b>	
	<b>ppm</b>	<b>mg/m<sup>3</sup></b>	<b>ppm</b>	<b>mg/m<sup>3</sup></b>
Belgium			980 (1)	2370 (1)
Finland	800	1900	1000 (1)	2400 (1)
Germany (AGS)	1000	2400	4000 (1)	9600 (1)
Germany (DFG)	1000	2400	4000 (1)	9600 (1)
Ireland			1000 (1)	
Switzerland	800	1900		
<b>Remarks</b>				
Belgium	(1) 15 minutes average value			
Finland	(1) 15 minutes average value			
Germany (AGS)	(1) 15 minutes average value			
Germany (DFG)	(1) 15 minutes average value			
Ireland	(1) 15 minutes average value			
<b>Carbon dioxide [ 124-38-9]</b>				
	<b>Limit value - Eight hours</b>		<b>Limit value - Short term</b>	
	<b>ppm</b>	<b>mg/m<sup>3</sup></b>	<b>ppm</b>	<b>mg/m<sup>3</sup></b>
Austria	5000	9000	10000	18000
Belgium	5000 (1)	9131 (1)	30000 (1)(2)	54784 (1)(2)
Denmark	5000	9000	10000	18000
European Union	5000	9000		
Finland	5000	9100		
France	5000	9000		
Germany (AGS)	5000	9100	10000 (1)	18200 (1)

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Germany (DFG)	5000	9100	10000 (1)	18200 (1)
Hungary		9000		
Ireland	5000	9000	15000 (1)	27000 (1)
Italy	5000	9000		
Latvia	5000	9000		
Norway	5000	9000		
Poland		9000		27000
Romania	5000	9000		
Spain	5000	9150	15000	27400
Sweden	5000	9000	10000 (1)	18000 (1)
Switzerland	5000	9000		
The Netherlands		9000		
United Kingdom	5000	9150	15000	27400
<b>Remarks</b>				
Belgium (1) Additional indication "A" means that this agent releases gas or vapor which has no physiological effect but lowers the oxygen content in the air. When the oxygen content is below 17-18% (vol/vol) it causes suffocation without a warning preceding it. (2) 15 minutes average value				
European Union Bold-type: Indicative Occupational Exposure Limit Value (IOELV) ~ (for references see bibliography)				
France <i>Italic type</i> : Indicative statutory limit values				
Germany (AGS) (1) 15 minutes average value				
Germany (DFG) (1) 15 minutes average value				
Ireland (1) 15 minutes reference period				
South Africa (1) 15 minutes average value				
Sweden (1) 15 minutes average value				

**Legal Basis:** Commission Directive 2006/15/EC, 2000/39/EC, 2009/161/EC; 2017/164/EC

### Recommended monitoring procedures

Monitoring procedures should be used for concentrations of hazardous components in the air. Air quality control procedures should be used in the workplace - as long as they are available and reasonable for the job - in accordance with the relevant Polish or European Standards, taking into account the conditions prevailing at the site of exposure and corresponding measurement methodologies adapted to the conditions work. Mode, type and frequency of tests and measurements should meet the requirements of the Regulation of the Minister of Health on 2 February 2011. (Dz. U. 2011 No. 33, item. 166).

## 8.2 **Exposure controls**

### 8.2.1 **Appropriate engineering controls**

Necessary local exhaust ventilation removing vapors from the places of their emission and general ventilation of the room. Local ventilation intake openings at or below the work surface. Exhaust vents of general ventilation at the top of the room and at the floor. Ventilation systems must comply with the conditions established due to the risk of fire. Do not use near sources of heat or sources of ignition. In case of insufficient ventilation, use respiratory protection.

### **Eye or face protection:**

No special equipment for minor exposure i.e. when handling small quantities.  
OTHERWISE: For potentially moderate or heavy exposures: Safety glasses with side-shields. Wear face-shield and protective suit for abnormal processing problems

### **Hand protection**

Use protective clothing made of natural materials (cotton) or synthetic fibers, protective gloves. With prolonged and repeated contact, use nitrile or leather protective gloves in accordance with PN-EN ISO 374 and PN-EN ISO 21420.



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<b><u>Skin and body protection :</u></b>	Gloves should remain flexible at a temperature below the boiling point of gas at atmospheric pressure Consider the hazard characteristics of this product and any special workplace conditions when selecting the appropriate type of protective gloves. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough Choose body protection according to the amount and concentration of the dangerous substance at the work place.
<b><u>Respiratory protection :</u></b>	Under normal conditions of use is not required. In case of insufficient ventilation, wear an approved respirator with a filter of AX type. Use breathing apparatus with independent air supply in case of: working in a confined space, insufficient amount of oxygen in the air, a large uncontrolled emissions or other circumstances when the mask with the filter does not give a sufficient protection
<b><u>Hygiene at work:</u></b>	Apply general hygiene at work rules. After work, remove contaminated clothes and wash thoroughly the whole body. Wash your hands and face during breaks. Restrain from drinking and eating or smoking at work.

### 8.2.2 Environmental exposure controls

Prevent direct runoff into drains / surface waters. Do not contaminate surface waters and drainage ditches, chemicals or used packaging. Any spills, particularly into surface water, should be reported to the appropriate authorities in accordance with national and local regulations. Export as chemical waste in accordance with national and local regulations.

## 9 SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Physical state:	Aerosol gas
Colour:	Colourless
Odour:	Hydrocarbon
Melting point/freezing point:	not applicable
Boiling point or initial boiling point and boiling range:	not applicable
Flammability:	Extremely flammable aerosol.
Lower and upper explosion limit:	2.1%vol-9.5%vol
Flash point:	not applicable
Auto-ignition temperature:	not available
Decomposition temperature:	not available
pH:	not available
Kinematic viscosity:	not available
Solubility:	Insoluble in water
Partition coefficient n-octanol/water (log value):	not available
Vapour pressure:	≥ 0,100 MPa (20°C) ≤ 2,55MPa (70°C)
Density and/or relative density:	0,5 (water=1).
Relative vapour density:	2,1 (air = 1).
Particle characteristics:	not applicable [aerosol]

### 9.2 Other information

#### 9.2.1 Information with regard to physical hazard classes

Aerosol:	Aerosol 1
Explosive properties	The product may form explosive mixture in air.
Oxidising properties	Not oxidising.

#### 9.2.2 Other safety characteristics

Information unavailable

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### 10 SECTION 10: STABILITY AND REACTIVITY

#### 10.1 Reactivity

No reactivity under recommended storage and handling conditions.

#### 10.2 Chemical stability

Stable under recommended storage and usage conditions.

#### 10.3 Possibility of hazardous reactions

Explosive hazard possible in contact with air.

#### 10.4 Conditions to avoid

Pressurised container: protect from sunlight and do not expose to temperatures exceeding 50°C. Keep away from open flames, hot surfaces, and sources of ignition

#### 10.5 Incompatible materials

Strong oxidizers

#### 10.6 Hazardous decomposition products

Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO<sub>2</sub>), carbon monoxide and other organic compounds. Reference to other sections: 5.2.

### 11 SECTION 11: TOXICOLOGICAL INFORMATION

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

Information regarding acute and/or delayed results of the exposure was defined on the basis of the information on product's classification and/or toxicological studies as well as the experience and knowledge of the manufacturer

##### Acute toxicity

Based on available data, the classification criteria are not met.

LC50 - inhalation rat 658 mg/l (4h)

##### Skin corrosion/irritation

Based on available data, the classification criteria are not met. Frostbite by spraying the skin spray at close range

##### Serious eye damage/irritation

Based on available data, the classification criteria are not met. Longer presence in an atmosphere contaminated with gas vapors may cause irritation of the eyes

##### Respiratory or skin sensitisation

Based on available data, the classification criteria are not met.

##### Germ cell mutagenicity

Based on available data, the classification criteria are not met.

##### Carcinogenicity

Based on available data, the classification criteria are not met.

##### Reproductive toxicity

Based on available data, the classification criteria are not met.

##### STOT - single exposure

May cause drowsiness or dizziness.

##### STOT - repeated exposure

Based on available data, the classification criteria are not met.

##### Aspiration hazard

May be fatal if swallowed and enters airways

##### **Delayed and immediate effects as well as chronic effects from short and long-term exposure**

Higher concentrations may cause coughing, headaches and dizziness, nausea, breathing disorders, sometimes psychomotor disorders, weakness, pain behind the sternum, drowsiness, memory disorders, nervousness. At high concentrations, loss of consciousness, convulsions, paralysis of the respiratory center may occur. As a gas heavier than

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air, it accumulates in the lower areas of rooms, which can lead to loss of consciousness and suffocation due to local lack of oxygen. As with all liquefied gases, contact with rapidly evaporating liquid may cause burns (frostbite) to the skin and eyes.

### 11.1.1 Endocrine disrupting properties

The components of the mixture do not affect the functioning of the hormonal system in accordance with the evaluation criteria defined in the Regulations: (EC) No 1907/2006, (EU) 2017/2100, (EU) 2018/605

### 11.1.2 Other information

Not applicable to substances

## 12 SECTION 12: ECOLOGICAL INFORMATION

### 12.1 Toxicity

#### Butane

LC50 - fish 24.11 mg/l (96h)

LC50 - invertebrates (Daphnia magna) 14.22 mg/l (48h)

CE50 – algae 7.71 mg/l (96h)

#### **Toxicity of mixture**

This mixture does not present an environmental hazard. No known or foreseeable environmental damage under standard conditions of use

Do not leave the product, even diluted or in great quantity, penetrate the ground water, water or the drains.

In order to minimise long term global pollution consideration should be given to:

- Reduction in consumption of disposable products and packaging.
- Participation in recycling activities

### 12.2 Persistence and degradability

Photodegradation: Half-life (direct photolysis): 3.2 d

Stability in water: Half-life value: < 62.4 h

### 12.3 Bioaccumulative potential

For mixtures not specified

### 12.4 Mobility in soil

Due to the low boiling point, the product quickly evaporates into the atmosphere

The mobility of the substance depends on their hydrophilic and hydrophobic properties and abiotic and biotic conditions of soil, including its structures, climatic conditions, seasons (in Poland, in a variable moderate climate) and soil organisms, mainly (bacteria, fungi, algae, invertebrates).

### 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

### 12.6 Endocrine disrupting properties

The product shall not contain ingredients included on the list established in accordance with Article 59(1) as having endocrine disrupting properties or ingredients with endocrine disrupting properties according to the criteria laid down in Regulation 2017/2100/EU or Regulation 2018/605/EU in concentrations equal to or greater than 0.1%.

### 12.7 Other adverse effects

The mixture is not classified as hazardous to the ozone layer. There should be considered the possibility of other harmful effects of the individual components of the mixture on the environment. (eg. the ability of disrupting endocrine, the impact of global warming potential).

## 13 SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

Disposal methods for the product: dispose in accordance with applicable regulations. Do not introduce into drains. Residues store in sealed, steel containers. Wastes classify as hazardous waste.

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Disposal methods for used packing: reuse/recycle/eliminate empty containers in accordance with the local legislation. Only completely emptied packaging can be recycled. Do not mix with other waste. The classification for this waste meets the requirements for the hazardous waste.

Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. DO NOT PRESSURISE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

### List of wastes

#### Hazardous waste\*:

**HP 3 "Flammable"**

Proposed waste code(s) for the used product:

**16 05 05** gases in pressure containers other than those mentioned in 16 05 04

**15 01 05** composite packaging

#### Waste management legislation

Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste, as amended. Decision 2000/532/EC establishing a list of wastes, as amended.

## 14 SECTION 14: TRANSPORT INFORMATION



### 14.1 UN number

ADR/RID/IMDG/IATA: UN1950

### 14.2 UN proper shipping name

ADR/RID/IMDG/IATA: **AEROSOLS, flammable**

### 14.3 Transport hazard class (es)

ADR/RID/IMDG/IATA: 2

### 14.4 Packing group

ADR/RID/IMDG/IATA: Not applicable

### 14.5 Environmental hazards

ADR/RID/IMDG/IATA: Mixture is not hazardous for the environment according to the criteria of transport regulations

### 14.6 Special precautions for user

#### Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)

Proper shipping name : AEROSOLS, flammable

Tunnel restriction code: [D]

Classification code: 5F

Special provisions (SP) 190.327.344.625

Transport category: 2

Limited Quantity: 1 L

Excepted quantities (EQ) E0

#### International Maritime Dangerous Goods Code (IMDG)

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Particulars in the shipper's declaration: AEROSOLS  
 Excepted quantities (EQ) E0  
 Limited quantities (LQ) 1 L  
 EmS F-D, S-U  
 Stowage and handling SW1; SW22  
**International Civil Aviation Organization (ICAO-IATA/DGR)**  
 Proper shipping name AEROSOLS, flammable  
IATA (Passenger)  
 EQ (IATA) : E0  
 Ltd Qty Pkg Inst. (IATA) : Y203  
 Ltd Qty Max Net Qty/Pkg: 30 kg G  
 Pkg Inst 203  
 Max Net Qty/Pkg 75 kg  
IATA (Cargo)  
 Pkg Inst : 203  
 Max Net Qty/Pkg 150 kg  
 Special provisions (IATA) : A145; A167; A802  
 ERG Code : 10L

14.7 **Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**  
 Inapplicable

### 15 SECTION 15: REGULATORY INFORMATION

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

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:	No 3
2012/18/EU (Seveso III)	<b>P3a FLAMMABLE AEROSOLS</b> 'Flammable' aerosols Category 1 or 2, containing flammable gases Category 1 or 2 or flammable liquids Category 1 Qualifying quantity (tonnes) for the application of lower and upper-tier requirements <b>150 net                      500 net</b>

**Other legislation:**

1. **1907/2006/EC** Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC
2. **1272/2008/EC** of the Regulation of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures - amending and repealing Directive 67/548/EEC and 1999/45/EC, and Regulation (EC) No 1907/2006.
3. **2018/669/UE** Commission Regulation (EU) 2018/669 of 16 April 2018 amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures. Text with EEA relevance.
4. **790/2009/EC** of 10 August 2009 amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures.
5. **2008/98/EC** Directive of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives
6. **94/62/EC** Commission Directive 2013/2/EU of 7 February 2013; amending Annex I to Directive 94/62/EC of the European Parliament and of the Council on packaging and packaging waste

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7. **2015/830/EU** Commission Regulation (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)
  8. **2013/10/EU** Commission Directive of 19 March 2013 amending Council Directive 75/324/EEC on the approximation of the laws of the Member States relating to aerosol dispensers in order to adapt its labelling provisions to Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures Text with EEA relevance
  9. European Agreement Concerning the International Carriage of Dangerous Goods by Road 2019-2021
- 15.2 **Chemical safety assessment**  
The supplier has not assessed chemical safety It is not required for the mixture.

## 16 SECTION 16: OTHER INFORMATION

### **Other sources of information:**

IUCLID Data Bank (European Commission – European Chemicals Bureau).

ESIS – European Chemical Substances Information System (European Chemicals Bureau).

MSDS developed in the Łukasiewicz Research Network - Institute of Industrial Chemistry prof. I. Mościckiego in Warsaw, based on the recipe and data sheets of ingredient

The information above is based on a current available data concerning the product, but also on the experience and knowledge in this field of the producer. They are neither a quality description of the product nor a guarantee of particular features. They are to be treated as aid to safety in transport, storage and usage of the product. That does not free the user from the responsibility of improper usage of the information above and also of improper compliance with the law norms in the field.

### **H (hazard) phrases specified in point 2 and 3 hereof:**

H220	Extremely flammable gas
Flam. Gas 1	Flammable gases, Hazard Category 1
H280	Contains gas under pressure; may explode if heated.
Press Gas	Flammable gas category 1

### **Explanation of returns**

ATE	Acute Toxicity Estimate
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
AND	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
CEN	European Committee for Standardisation
C&L	Classification and Labelling
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
CAS#	Chemical Abstracts Service number
CMR	Carcinogen, Mutagen, or Reproductive Toxicant
CSA	Chemical Safety Assessment
DNEL	Derived No Effect Level
DPD	Dangerous Preparations Directive 1999/45/EC
ECHA	European Chemicals Agency
EC-Number	EINECS and ELINCS Number (see also EINECS and ELINCS)
EEC	European Economic Community
EINECS	European Inventory of Existing Commercial Substances

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ELINCS	European List of notified Chemical Substances
GHS	Globally Harmonized System
IATA	International Air Transport Association
ICAO-TI	Technical Instructions for the Safe Transport of Dangerous Goods by Air
IMDG	International Maritime Dangerous Goods
IMSBC	International Maritime Solid Bulk Cargoes
IUCLID	International Uniform Chemical Information Database
IUPAC	International Union for Pure Applied Chemistry
Know	octanol-water partition coefficient
LC50	Lethal Concentration to 50 % of a test population
LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)
LoW	List of Wastes (see <a href="http://ec.europa.eu/environment/waste/framework/list.htm">http://ec.europa.eu/environment/waste/framework/list.htm</a> )
MSDS	Material Safety Data Sheet
OEL	Occupational Exposure Limit
PBT	Persistent, Bioaccumulative and Toxic substance
PEC	Predicted Effect Concentration
PNEC(s)	Predicted No Effect Concentration(s)
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
STOT	Specific Target Organ Toxicity
(STOT) RE	Repeated Exposure
(STOT) SE	Single Exposure
SVHC	Substances of Very High Concern
UFI	Unique Formula Identifier
UN	United Nations
vPvB	Very Persistent and Very Bioaccumulative

### Trainings

Before commencing working with the product, the user should learn the Health & Safety regulations, regarding handling chemicals, and in particular, undergo a proper workplace training. Drivers should be trained and obtain proper certification in accordance with the requirements of ADR

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