


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

- 1.1 Product identifier:** MINOS AUTO BRAKE & METAL CLEANER - brake & metal cleaner 24-262
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:**  
Relevant uses: Cleaner  
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:** EVOCHEM S.A.  
Tzaverdella Place  
133 41 PHILI , ATTICA - GREECE  
Phone.: 0030 210 5590460 , 0030 210 5590155  
Fax: 0030 210 6254737 , 0030 210 5590244  
Email: [info@evochem.gr](mailto:info@evochem.gr) [vmergoupis@evochem.gr](mailto:vmergoupis@evochem.gr) ;  
[sales@evochem.gr](mailto:sales@evochem.gr) [www.evochem.gr](http://www.evochem.gr)
- 1.4 Emergency telephone number:** National Poisoning Center 2107793777

## 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.  
Aquatic Chronic 2: Hazardous to the aquatic environment, long-term hazard, Category 2, H411  
Carc. 2: Carcinogenicity, Category 2, H351  
Eye Irrit. 2: Eye irritation, Category 2, H319  
Flam. Liq. 2: Flammable liquids, Category 2, H225
- 2.2 Label elements:**  
**CLP Regulation (EC) No 1272/2008:**  
**Danger**
- 
- Hazard statements:**  
Aquatic Chronic 2: H411 - Toxic to aquatic life with long lasting effects  
Carc. 2: H351 - Suspected of causing cancer  
Eye Irrit. 2: H319 - Causes serious eye irritation  
Flam. Liq. 2: H225 - Highly flammable liquid and vapour
- 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  
P264: Wash thoroughly after handling  
P280: Wear protective gloves/protective clothing/eye protection/face protection  
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P370+P378: In case of fire: Use ABC powder extinguisher to extinguish.  
P501: Dispose of contents/container according to the separated collection system used in your municipality
- Supplementary information:**  
EUH066: Repeated exposure may cause skin dryness or cracking
- Substances that contribute to the classification**  
Perchloroethylene
- 2.3 Other hazards:**  
Product fails to meet PBT/vPvB criteria

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

- 3.1 Substance:**






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

Non-applicable

**3.2 Mixture:****Chemical description:** Miscellaneous products**Components:**

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

Identification	Chemical name/Classification	Concentration
CAS: 127-18-4 EC: 204-825-9 Index: 602-028-00-4 REACH 01-2119475329-28-XXX ↓	<b>Perchloroethylene<sup>(1)</sup></b> ATP CLP00	24 - <50 % 
	Regulation 1272/2008 Aquatic Chronic 2: H411; Carc. 2: H351 - Warning	
CAS: 67-64-1 EC: 200-662-2 Index: 606-001-00-8 REACH 01-2119471330-49-XXX ↓	<b>Acetone<sup>(1)</sup></b> ATP CLP00	9,9 - <19 % 
	Regulation 1272/2008 Eye Irrit. 2: H319; Flam. Liq. 2: H225; STOT SE 3: H336; EUH066 - Danger	
CAS: 1330-20-7 EC: 215-535-7 Index: 601-022-00-9 REACH 01-2119488216-32-XXX ↓	<b>Xylene<sup>(1)</sup></b> ATP CLP00	4,9 - <9,9 % 
	Regulation 1272/2008 Acute Tox. 4: H312+H332; Flam. Liq. 3: H226; Skin Irrit. 2: H315 - Warning	
CAS: 141-78-6 EC: 205-500-4 Index: 607-022-00-5 REACH 01-2119475103-46-XXX ↓	<b>Ethyl acetate<sup>(1)</sup></b> ATP CLP00	2,4 - <4,9 % 
	Regulation 1272/2008 Eye Irrit. 2: H319; Flam. Liq. 2: H225; STOT SE 3: H336; EUH066 - Danger	
CAS: 34590-94-8 EC: 252-104-2 Index: Non-applicable REACH 01-2119450011-60-XXX ↓	<b>Dipropylene Glycol Methyl Ether<sup>(2)</sup></b> Not classified	0,9 - <2,4 %
	Regulation 1272/2008	
CAS: 67-56-1 EC: 200-659-6 Index: 603-001-00-X REACH 01-2119433307-44-XXX ↓	<b>Methanol<sup>(1)</sup></b> ATP CLP00	0,09 - <0,24 % 
	Regulation 1272/2008 Acute Tox. 3: H301+H311+H331; Flam. Liq. 2: H225; STOT SE 1: H370 - Danger	

<sup>(1)</sup> Substances presenting a health or environmental hazard which meet criteria laid down in Regulation (EU) No. 2015/830<sup>(2)</sup> Substance with a Union workplace exposure limit

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:**

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 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:**

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:**

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## SECTION 4: FIRST AID MEASURES (continued)

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<sub>2</sub>). 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 at all cost any type of spillage into an aqueous medium. Contain the product absorbed appropriately in hermetically sealed containers. Notify the relevant authority in case of exposure to the general public or the environment.

**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

Transfer in well ventilated areas, preferably through localized extraction. Fully control sources of ignition (mobile phones, sparks,...) and ventilate during cleaning operations. Avoid the existence of dangerous atmospheres inside containers, applying inertization systems where possible. Transfer at a slow speed to avoid the creation of electrostatic charges. Against the possibility of electrostatic charges: ensure a perfect equipotential connection, always use groundings, do not wear work clothes made of acrylic fibres, preferably wearing cotton clothing and conductive footwear. Comply with the essential security requirements for equipment and systems defined in Directive 94/9/EC (ATEX 100) and with the minimum requirements for protecting the security and health of workers under the selection criteria of Directive 1999/92/EC (ATEX 137). Consult section 10 for conditions and materials that should be avoided.

## C.- Technical recommendations to prevent ergonomic and toxicological risks

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**SECTION 7: HANDLING AND STORAGE (continued)**

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

D.- Technical recommendations to prevent environmental risks

Due to the danger of this product for the environment it is recommended to use it within an area containing contamination control barriers in case of spillage, as well as having absorbent material in close proximity.

**7.2 Conditions for safe storage, including any incompatibilities:**

A.- Technical measures for storage

- Minimum Temp.: 5 °C
- Maximum Temp.: 35 °C
- Maximum time: 12 Months

B.- General conditions for storage

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

**7.3 Specific end use(s):**

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

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**8.1 Control parameters:**

Substances whose occupational exposure limits have to be monitored in the work environment

Identification	Environmental limits		
	IOELV (8h)		
Perchloroethylene CAS: 127-18-4 EC: 204-825-9	IOELV (8h)	20 ppm	138 mg/m <sup>3</sup>
	IOELV (STEL)	40 ppm	275 mg/m <sup>3</sup>
	Year	2018	
Acetone CAS: 67-64-1 EC: 200-662-2	IOELV (8h)	500 ppm	1210 mg/m <sup>3</sup>
	IOELV (STEL)		
	Year	2018	
Xylene CAS: 1330-20-7 EC: 215-535-7	IOELV (8h)	50 ppm	221 mg/m <sup>3</sup>
	IOELV (STEL)	100 ppm	442 mg/m <sup>3</sup>
	Year	2018	
Ethyl acetate CAS: 141-78-6 EC: 205-500-4	IOELV (8h)	200 ppm	734 mg/m <sup>3</sup>
	IOELV (STEL)	400 ppm	1468 mg/m <sup>3</sup>
	Year	2018	
Dipropylene Glycol Methyl Ether CAS: 34590-94-8 EC: 252-104-2	IOELV (8h)	50 ppm	308 mg/m <sup>3</sup>
	IOELV (STEL)		
	Year	2018	
Methanol CAS: 67-56-1 EC: 200-659-6	IOELV (8h)	200 ppm	260 mg/m <sup>3</sup>
	IOELV (STEL)		
	Year	2018	

**DNEL (Workers):**

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Perchloroethylene CAS: 127-18-4 EC: 204-825-9	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	39,4 mg/kg	Non-applicable
	Inhalation	275 mg/m <sup>3</sup>	Non-applicable	138 mg/m <sup>3</sup>	Non-applicable
Acetone CAS: 67-64-1 EC: 200-662-2	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	186 mg/kg	Non-applicable
	Inhalation	Non-applicable	2420 mg/m <sup>3</sup>	1210 mg/m <sup>3</sup>	Non-applicable
Xylene CAS: 1330-20-7 EC: 215-535-7	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	180 mg/kg	Non-applicable
	Inhalation	289 mg/m <sup>3</sup>	289 mg/m <sup>3</sup>	77 mg/m <sup>3</sup>	Non-applicable
Ethyl acetate CAS: 141-78-6 EC: 205-500-4	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	63 mg/kg	Non-applicable
	Inhalation	1468 mg/m <sup>3</sup>	1468 mg/m <sup>3</sup>	734 mg/m <sup>3</sup>	734 mg/m <sup>3</sup>

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## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Dipropylene Glycol Methyl Ether CAS: 34590-94-8 EC: 252-104-2	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	65 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	310 mg/m <sup>3</sup>	Non-applicable
Methanol CAS: 67-56-1 EC: 200-659-6	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	40 mg/kg	Non-applicable	40 mg/kg	Non-applicable
	Inhalation	260 mg/m <sup>3</sup>	260 mg/m <sup>3</sup>	260 mg/m <sup>3</sup>	260 mg/m <sup>3</sup>

## DNEL (General population):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Perchloroethylene CAS: 127-18-4 EC: 204-825-9	Oral	Non-applicable	Non-applicable	1,3 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	23 mg/kg	Non-applicable
	Inhalation	138 mg/m <sup>3</sup>	Non-applicable	34,5 mg/m <sup>3</sup>	Non-applicable
Acetone CAS: 67-64-1 EC: 200-662-2	Oral	Non-applicable	Non-applicable	62 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	62 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	200 mg/m <sup>3</sup>	Non-applicable
Xylene CAS: 1330-20-7 EC: 215-535-7	Oral	Non-applicable	Non-applicable	1,6 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	108 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	14,8 mg/m <sup>3</sup>	Non-applicable
Ethyl acetate CAS: 141-78-6 EC: 205-500-4	Oral	Non-applicable	Non-applicable	4,5 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	37 mg/kg	Non-applicable
	Inhalation	734 mg/m <sup>3</sup>	734 mg/m <sup>3</sup>	367 mg/m <sup>3</sup>	367 mg/m <sup>3</sup>
Dipropylene Glycol Methyl Ether CAS: 34590-94-8 EC: 252-104-2	Oral	Non-applicable	Non-applicable	1,67 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	15 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	37,2 mg/m <sup>3</sup>	Non-applicable
Methanol CAS: 67-56-1 EC: 200-659-6	Oral	8 mg/kg	Non-applicable	8 mg/kg	Non-applicable
	Dermal	8 mg/kg	Non-applicable	8 mg/kg	Non-applicable
	Inhalation	50 mg/m <sup>3</sup>	50 mg/m <sup>3</sup>	50 mg/m <sup>3</sup>	50 mg/m <sup>3</sup>

## PNEC:

Identification				
Perchloroethylene CAS: 127-18-4 EC: 204-825-9	STP	11,2 mg/L	Fresh water	0,051 mg/L
	Soil	0,01 mg/kg	Marine water	0,0051 mg/L
	Intermittent	0,0364 mg/L	Sediment (Fresh water)	0,903 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0,0903 mg/kg
Acetone CAS: 67-64-1 EC: 200-662-2	STP	100 mg/L	Fresh water	10,6 mg/L
	Soil	29,5 mg/kg	Marine water	1,06 mg/L
	Intermittent	21 mg/L	Sediment (Fresh water)	30,4 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	3,04 mg/kg
Xylene CAS: 1330-20-7 EC: 215-535-7	STP	6,58 mg/L	Fresh water	0,327 mg/L
	Soil	2,31 mg/kg	Marine water	0,327 mg/L
	Intermittent	0,327 mg/L	Sediment (Fresh water)	12,46 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	12,46 mg/kg
Ethyl acetate CAS: 141-78-6 EC: 205-500-4	STP	650 mg/L	Fresh water	0,24 mg/L
	Soil	0,148 mg/kg	Marine water	0,024 mg/L
	Intermittent	1,65 mg/L	Sediment (Fresh water)	1,15 mg/kg
	Oral	200 g/kg	Sediment (Marine water)	0,115 mg/kg
Dipropylene Glycol Methyl Ether CAS: 34590-94-8 EC: 252-104-2	STP	4168 mg/L	Fresh water	19 mg/L
	Soil	2,74 mg/kg	Marine water	1,9 mg/L
	Intermittent	190 mg/L	Sediment (Fresh water)	70,2 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	7,02 mg/kg

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Identification				
Methanol CAS: 67-56-1 EC: 200-659-6	STP	100 mg/L	Fresh water	154 mg/L
	Soil	23,5 mg/kg	Marine water	15,4 mg/L
	Intermittent	1540 mg/L	Sediment (Fresh water)	570,4 mg/kg
	Oral	Non-applicable	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



Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory respiratory tract protection	Filter mask for gases and vapours		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		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 mask		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		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.
 Mandatory foot protection	Safety footwear for protection against chemical risk, with antistatic and heat resistant properties		EN 13287:2008 EN ISO 20345:2011 EN 13832-1:2006	Replace boots at any sign of deterioration.

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

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## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

**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 °C:	1072 kg/m <sup>3</sup> (1072 g/L)
Average carbon number:	3,51
Average molecular weight:	115,7 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:	Not available
Colour:	Not available
Odour:	Not available
Odour threshold:	Non-applicable *

**Volatility:**

Boiling point at atmospheric pressure:	87 °C
Vapour pressure at 20 °C:	13577 Pa
Vapour pressure at 50 °C:	46231 Pa (46 kPa)
Evaporation rate at 20 °C:	Non-applicable *

**Product description:**

Density at 20 °C:	1072 kg/m <sup>3</sup>
Relative density at 20 °C:	1,072
Dynamic viscosity at 20 °C:	0,56 cP
Kinematic viscosity at 20 °C:	0,52 cSt
Kinematic viscosity at 40 °C:	Non-applicable *
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:	Non-applicable *
Decomposition temperature:	Non-applicable *
Melting point/freezing point:	Non-applicable *
Explosive properties:	Non-applicable *
Oxidising properties:	Non-applicable *

**Flammability:**

Flash Point:	-6 °C
Flammability (solid, gas):	Non-applicable *
Autoignition temperature:	237 °C
Lower flammability limit:	Not available

\*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)

Upper flammability limit:	Not available
<b>Explosive:</b>	
Lower explosive limit:	Non-applicable *
Upper explosive limit:	Non-applicable *
<b>9.2 Other information:</b>	
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	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 (CO<sub>2</sub>), 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: 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.

## 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, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

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

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## SECTION 11: TOXICOLOGICAL INFORMATION (continued)

- Contact with the skin: Based on available data, the classification criteria are not met. However, it contains substances classified as dangerous for skin contact. For more information see section 3.
  - Contact with the eyes: Produces eye damage after contact.
- D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):
- Carcinogenicity: Exposure to this product can cause cancer. For more specific information on the possible health effects see section 2.
  - 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 does contain substances which are classified as dangerous as a result of a single exposure. 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, 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
Methanol CAS: 67-56-1 EC: 200-659-6	LD50 oral	100 mg/kg	Rat
	LD50 dermal	300 mg/kg	Rabbit
	LC50 inhalation	3 mg/L (4 h)	Rat
Ethyl acetate CAS: 141-78-6 EC: 205-500-4	LD50 oral	4100 mg/kg	Rat
	LD50 dermal	20000 mg/kg	Rabbit
	LC50 inhalation	Non-applicable	
Acetone CAS: 67-64-1 EC: 200-662-2	LD50 oral	5800 mg/kg	Rat
	LD50 dermal	7426 mg/kg	Rabbit
	LC50 inhalation	76 mg/L (4 h)	Rat
Xylene CAS: 1330-20-7 EC: 215-535-7	LD50 oral	2100 mg/kg	Rat
	LD50 dermal	1100 mg/kg (ATEi)	Rat
	LC50 inhalation	11 mg/L (4 h) (ATEi)	
Perchloroethylene CAS: 127-18-4 EC: 204-825-9	LD50 oral	2400 mg/kg	Rat
	LD50 dermal	Non-applicable	
	LC50 inhalation	20,2 mg/L (4 h)	Mouse

## 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
Perchloroethylene CAS: 127-18-4 EC: 204-825-9	LC50	4.99 mg/L (96 h)	Oncorhynchus mykiss	Fish
	EC50	3.2 mg/L (24 h)	Daphnia magna	Crustacean
	EC50	500 mg/L (96 h)	Skeletonema costatum	Algae

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## SECTION 12: ECOLOGICAL INFORMATION (continued)

Identification	Acute toxicity		Species	Genus
Acetone CAS: 67-64-1 EC: 200-662-2	LC50	5540 mg/L (96 h)	Oncorhynchus mykiss	Fish
	EC50	23.5 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	3400 mg/L (48 h)	Chlorella pyrenoidosa	Algae
Xylene CAS: 1330-20-7 EC: 215-535-7	LC50	13.5 mg/L (96 h)	Oncorhynchus mykiss	Fish
	EC50	3.4 mg/L (48 h)	Ceriodaphnia dubia	Crustacean
	EC50	10 mg/L (72 h)	Skeletonema costatum	Algae
Ethyl acetate CAS: 141-78-6 EC: 205-500-4	LC50	230 mg/L (96 h)	Pimephales promelas	Fish
	EC50	717 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	3300 mg/L (48 h)	Scenedesmus subspicatus	Algae
Dipropylene Glycol Methyl Ether CAS: 34590-94-8 EC: 252-104-2	LC50	10000 mg/L (96 h)	Pimephales promelas	Fish
	EC50	1919 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	Non-applicable		
Methanol CAS: 67-56-1 EC: 200-659-6	LC50	15400 mg/L (96 h)	Lepomis macrochirus	Fish
	EC50	12000 mg/L (96 h)	Nitrocra spinipes	Crustacean
	EC50	530 mg/L (168 h)	Microcystis aeruginosa	Algae

## 12.2 Persistence and degradability:

Identification	Degradability		Biodegradability	
Perchloroethylene CAS: 127-18-4 EC: 204-825-9	BOD5	Non-applicable	Concentration	100 mg/L
	COD	Non-applicable	Period	28 days
	BOD5/COD	Non-applicable	% Biodegradable	11 %
Acetone CAS: 67-64-1 EC: 200-662-2	BOD5	Non-applicable	Concentration	100 mg/L
	COD	Non-applicable	Period	28 days
	BOD5/COD	0.96	% Biodegradable	96 %
Xylene CAS: 1330-20-7 EC: 215-535-7	BOD5	Non-applicable	Concentration	Non-applicable
	COD	Non-applicable	Period	28 days
	BOD5/COD	Non-applicable	% Biodegradable	88 %
Ethyl acetate CAS: 141-78-6 EC: 205-500-4	BOD5	1.36 g O2/g	Concentration	100 mg/L
	COD	1.69 g O2/g	Period	14 days
	BOD5/COD	0.81	% Biodegradable	83 %
Dipropylene Glycol Methyl Ether CAS: 34590-94-8 EC: 252-104-2	BOD5	Non-applicable	Concentration	Non-applicable
	COD	0.00202 g O2/g	Period	28 days
	BOD5/COD	Non-applicable	% Biodegradable	73 %
Methanol CAS: 67-56-1 EC: 200-659-6	BOD5	Non-applicable	Concentration	100 mg/L
	COD	1.42 g O2/g	Period	14 days
	BOD5/COD	Non-applicable	% Biodegradable	92 %

## 12.3 Bioaccumulative potential:

Identification	Bioaccumulation potential	
Perchloroethylene CAS: 127-18-4 EC: 204-825-9	BCF	77
	Pow Log	2.53
	Potential	Moderate
Acetone CAS: 67-64-1 EC: 200-662-2	BCF	1
	Pow Log	-0.24
	Potential	Low
Xylene CAS: 1330-20-7 EC: 215-535-7	BCF	9
	Pow Log	2.77
	Potential	Low
Ethyl acetate CAS: 141-78-6 EC: 205-500-4	BCF	30
	Pow Log	0.73
	Potential	Moderate
Dipropylene Glycol Methyl Ether CAS: 34590-94-8 EC: 252-104-2	BCF	1
	Pow Log	-0.06
	Potential	Low

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## SECTION 12: ECOLOGICAL INFORMATION (continued)

Identification	Bioaccumulation potential	
Methanol	BCF	3
CAS: 67-56-1	Pow Log	-0.77
EC: 200-659-6	Potential	Low

## 12.4 Mobility in soil:

Identification	Absorption/desorption		Volatility	
Perchloroethylene CAS: 127-18-4 EC: 204-825-9	Koc	Non-applicable	Henry	Non-applicable
	Conclusion	Non-applicable	Dry soil	Non-applicable
	Surface tension	3,165E-2 N/m (25 °C)	Moist soil	Non-applicable
Acetone CAS: 67-64-1 EC: 200-662-2	Koc	1	Henry	2,93 Pa·m <sup>3</sup> /mol
	Conclusion	Very High	Dry soil	Yes
	Surface tension	2,304E-2 N/m (25 °C)	Moist soil	Yes
Xylene CAS: 1330-20-7 EC: 215-535-7	Koc	202	Henry	524,86 Pa·m <sup>3</sup> /mol
	Conclusion	Moderate	Dry soil	Yes
	Surface tension	Non-applicable	Moist soil	Yes
Ethyl acetate CAS: 141-78-6 EC: 205-500-4	Koc	59	Henry	13,58 Pa·m <sup>3</sup> /mol
	Conclusion	Very High	Dry soil	Yes
	Surface tension	2,324E-2 N/m (25 °C)	Moist soil	Yes
Methanol CAS: 67-56-1 EC: 200-659-6	Koc	Non-applicable	Henry	Non-applicable
	Conclusion	Non-applicable	Dry soil	Non-applicable
	Surface tension	2,355E-2 N/m (25 °C)	Moist soil	Non-applicable

## 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

## 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):

HP14 Ecotoxic, HP3 Flammable, HP4 Irritant — skin irritation and eye damage, HP7 Carcinogenic

## 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 recommend 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:

## SECTION 14: TRANSPORT INFORMATION (continued)



- 14.1 UN number:** UN1993  
**14.2 UN proper shipping name:** FLAMMABLE LIQUID, N.O.S. (Acetone; Perchloroethylene)  
**14.3 Transport hazard class(es):** 3  
 Labels: 3  
**14.4 Packing group:** II  
**14.5 Environmental hazards:** Yes  
**14.6 Special precautions for user**  
 Special regulations: 274, 601, 640D  
 Tunnel restriction code: D/E  
 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:** UN1993  
**14.2 UN proper shipping name:** FLAMMABLE LIQUID, N.O.S. (Acetone; Perchloroethylene)  
**14.3 Transport hazard class(es):** 3  
 Labels: 3  
**14.4 Packing group:** II  
**14.5 Environmental hazards:** Yes  
**14.6 Special precautions for user**  
 Special regulations: 274  
 EmS Codes: F-E, S-E  
 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 air:**

With regard to IATA/ICAO 2017:



- 14.1 UN number:** UN1993  
**14.2 UN proper shipping name:** FLAMMABLE LIQUID, N.O.S. (Acetone; Perchloroethylene)  
**14.3 Transport hazard class(es):** 3  
 Labels: 3  
**14.4 Packing group:** II  
**14.5 Environmental hazards:** Yes  
**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

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

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## SECTION 15: REGULATORY INFORMATION (continued)

Shall not be used, as substance or as mixtures in aerosol dispensers where these aerosol dispensers are intended for supply to the general public for entertainment and decorative purposes such as the following:

- metallic glitter intended mainly for decoration,
- artificial snow and frost,
- "whoopee" cushions,
- silly string aerosols,
- imitation excrement,
- horns for parties,
- decorative flakes and foams,
- artificial cobwebs,
- stink bombs.

Without prejudice to the application of other Community provisions on the classification, packaging and labelling of substances, suppliers shall ensure before the placing on the market that the packaging of aerosol dispensers referred to above is marked visibly, legibly and indelibly with:

'For professional users only'.

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:**

H319: Causes serious eye irritation  
H351: Suspected of causing cancer  
H411: Toxic to aquatic life with long lasting effects  
H225: Highly flammable liquid and vapour

**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. 3: H301+H311+H331 - Toxic if swallowed, in contact with skin or if inhaled  
Acute Tox. 4: H312+H332 - Harmful in contact with skin or if inhaled  
Aquatic Chronic 2: H411 - Toxic to aquatic life with long lasting effects  
Carc. 2: H351 - Suspected of causing cancer  
Eye Irrit. 2: H319 - Causes serious eye irritation  
Flam. Liq. 2: H225 - Highly flammable liquid and vapour  
Flam. Liq. 3: H226 - Flammable liquid and vapour  
Skin Irrit. 2: H315 - Causes skin irritation  
STOT SE 1: H370 - Causes damage to organs  
STOT SE 3: H336 - May cause drowsiness or dizziness

**Classification procedure:**

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## SECTION 16: OTHER INFORMATION (continued)

Eye Irrit. 2: Calculation method  
Carc. 2: Calculation method  
Aquatic Chronic 2: Calculation method  
Flam. Liq. 2: Calculation method (2.6.4.3)

**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

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 -