

**COPPER LUBRICANT**

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Version: 7 (Replaced 6)

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

- 1.1 Product identifier:** COPPER LUBRICANT  
**Other means of identification:**  
**UFI:** YFRX-R2KU-F003-KVE2
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:**  
 Relevant uses: Car repair. For professional users only.  
 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:**  
 Troton Sp. z o.o.  
 Ząbrowo 14A  
 78-120 Gościno - Zachodniopomorskie - Polska  
 Phone: +48 94 35 123 94 - Fax: +48 94 35 126 22  
 troton@troton.com.pl  
 www.troton.pl / www.troton.eu
- 1.4 Emergency telephone number:** ( 8am-4pm)+48 094 35 123 94; 112

**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: Pressurised container: May burst if heated., H229  
 Aerosol 1: Flammable aerosols, Category 1, H222  
 Aquatic Acute 1: Hazardous to the aquatic environment, acute hazard, Category 1, H400  
 Aquatic Chronic 2: Hazardous to the aquatic environment, long-term hazard, Category 2, H411  
 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:**  
 Aerosol 1: H229 - Pressurised container: May burst if heated.  
 Aerosol 1: H222 - Extremely flammable aerosol.  
 Aquatic Chronic 1: H410 - Very toxic to aquatic life with long lasting effects.  
 STOT SE 3: H336 - May cause drowsiness or dizziness.
- Precautionary statements:**  
 P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
 P211: Do not spray on an open flame or other ignition source.  
 P251: Do not pierce or burn, even after use.  
 P271: Use only outdoors or in a well-ventilated area.  
 P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 P403+P233: Store in a well-ventilated place. Keep container tightly closed.  
 P410+P412: Protect from sunlight. Do not 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.
- Substances that contribute to the classification**  
 pentane
- 2.3 Other hazards:**

Safety data sheet

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**SECTION 2: HAZARDS IDENTIFICATION (continued)**

Product fails to meet PBT/vPvB criteria  
 Endocrine-disrupting properties: The product fails to meet the criteria.

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS \*\***

**3.1 Substance:**






Non-applicable

**3.2 Mixture:**

**Chemical description:** Mixture composed of chemical products

**Components:**

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

Identification	Chemical name/Classification		Concentration
CAS: 109-66-0 EC: 203-692-4 Index: 601-006-00-1 REACH: 01-2119459286-30-XXXX	<b>pentane<sup>(1)</sup></b>	ATP CLP00	25 - <50 %
	Regulation 1272/2008	Aquatic Chronic 2: H411; Asp. Tox. 1: H304; Flam. Liq. 2: H225; STOT SE 3: H336; EUH066 - Danger 	
CAS: 74-98-6 EC: 200-827-9 Index: 601-003-00-5 REACH: 01-2119486944-21-XXXX	<b>Propane<sup>(2)</sup></b>	ATP CLP00	10 - <25 %
	Regulation 1272/2008	Flam. Gas 1A: H220; Press. Gas: H280 - Danger 	
CAS: 106-97-8 EC: 203-448-7 Index: 601-004-00-0 REACH: 01-2119474691-32-XXXX	<b>Butane<sup>(2)</sup></b>	ATP CLP00	10 - <25 %
	Regulation 1272/2008	Flam. Gas 1A: H220; Press. Gas: H280 - Danger 	
CAS: 75-28-5 EC: 200-857-2 Index: 601-004-00-0 REACH: 01-2119485395-27-XXXX	<b>Isobutane<sup>(2)</sup></b>	ATP CLP00	10 - <25 %
	Regulation 1272/2008	Flam. Gas 1A: H220; Press. Gas: H280 - Danger 	
CAS: 7440-50-8 EC: 231-159-6 Index: 029-024-00-X REACH: 01-2119480154-42-XXXX	<b>Copper powder<sup>(1)</sup></b>	Self-classified	2,5 - <5 %
	Regulation 1272/2008	Acute Tox. 4: H302; Aquatic Acute 1: H400; Aquatic Chronic 2: H411 - Warning 	

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

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

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

**Other information:**

Identification	M-factor	
	Copper powder CAS: 7440-50-8      EC: 231-159-6	Acute
	Chronic	1

\*\* Changes with regards to the previous version

**SECTION 4: FIRST AID MEASURES**

**4.1 Description of first aid measures:**

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

**By inhalation:**

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.

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**SECTION 4: FIRST AID MEASURES (continued)**

**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:**

Non-applicable

**SECTION 5: FIREFIGHTING MEASURES**

**5.1 Extinguishing media:**

**Suitable extinguishing media:**

If possible use polyvalent powder fire extinguishers (ABC powder), alternatively use foam or carbon dioxide extinguishers (CO<sub>2</sub>).

**Unsuitable extinguishing media:**

IT IS RECOMMENDED NOT to use full jet 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:**

**For non-emergency personnel:**

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

**For emergency responders:**

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

**6.2 Environmental precautions:**

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:**

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**SECTION 6: ACCIDENTAL RELEASE MEASURES (continued)**

See sections 8 and 13.

**SECTION 7: HANDLING AND STORAGE**

**7.1 Precautions for safe handling:**

A.- General precautions for safe use

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

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

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. Consult section 10 for conditions and materials that should be avoided.

C.- Technical recommendations on general occupational hygiene

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

D.- Technical recommendations to prevent environmental risks

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.:            15 °C  
 Maximum Temp.:        25 °C  
 Maximum time:            12 Months

B.- General conditions for storage

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

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

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

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

**8.1 Control parameters:**

Substances whose occupational exposure limits have to be monitored in the workplace (European OEL, not country-specific legislation):

Directive (EU) 2000/39, Directive 2004/37/EC, Directive (EU) 2006/15, Directive (EU) 2009/161, Directive (EU) 2017/164, Directive (EU) 2019/1831:

Identification	Occupational exposure limits		
	IOELV (8h)	1000 ppm	3000 mg/m <sup>3</sup>
pentane CAS: 109-66-0    EC: 203-692-4	IOELV (STEL)		

**DNEL (Workers):**

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
pentane CAS: 109-66-0 EC: 203-692-4	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	432 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	3000 mg/m <sup>3</sup>	Non-applicable
Copper powder CAS: 7440-50-8 EC: 231-159-6	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	273 mg/kg	Non-applicable	137 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	Non-applicable	Non-applicable

**DNEL (General population):**

Safety data sheet

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

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
pentane CAS: 109-66-0 EC: 203-692-4	Oral	Non-applicable	Non-applicable	214 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	214 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	643 mg/m <sup>3</sup>	Non-applicable
Copper powder CAS: 7440-50-8 EC: 231-159-6	Oral	Non-applicable	Non-applicable	0,041 mg/kg	Non-applicable
	Dermal	273 mg/kg	Non-applicable	137 mg/kg	Non-applicable
	Inhalation	Non-applicable	1 mg/m <sup>3</sup>	Non-applicable	1 mg/m <sup>3</sup>

**PNEC:**



Identification				
pentane CAS: 109-66-0 EC: 203-692-4	STP	3,6 mg/L	Fresh water	0,23 mg/L
	Soil	0,55 mg/kg	Marine water	0,23 mg/L
	Intermittent	0,88 mg/L	Sediment (Fresh water)	1,2 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	1,2 mg/kg
Copper powder CAS: 7440-50-8 EC: 231-159-6	STP	0,23 mg/L	Fresh water	0,0078 mg/L
	Soil	65 mg/kg	Marine water	0,0052 mg/L
	Intermittent	Non-applicable	Sediment (Fresh water)	87 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	676 mg/kg

**8.2 Exposure controls:**



**A.- Individual protection measures, such as personal protective equipment**

As a preventative measure it is recommended to use basic Personal Protective Equipment, with the corresponding <<CE marking>> in accordance with Regulation (EU) 2016/425. For more information on Personal Protective Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1. All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

**B.- Respiratory protection**



Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory respiratory tract protection	Filter mask for gases, vapours and particles		EN 149:2001+A1:2009 EN 405:2002+A1:2010 EN ISO 136:1998	Replace when an increase in resistance to breathing is observed and/or a smell or taste of the contaminant is detected.

**C.- Specific protection for the hands**

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory hand protection	NON-disposable chemical protective gloves		EN ISO 374-1:2016+A1:2018 EN 16523-1:2015+A1:2018 EN ISO 21420:2020	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 calculated in advance with total reliability and has therefore to be checked prior to the application.

**D.- Eye and face protection**

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory face protection	Face shield		EN 166:2002 EN 167:2002 EN 168:2002 EN ISO 4007:2018	Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing.

**E.- Body protection**

Safety data sheet

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

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory complete body protection	Disposable clothing for protection against chemical risks, with antistatic and fireproof properties		EN 1149-1,2,3 EN 13034:2005+A1:2009 EN ISO 13982-1:2004/A1:2010 EN ISO 6529:2013 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 ISO 13287:2020 EN ISO 20345:2011 EN 13832-1:2019	Replace boots at any sign of deterioration.

**F.- Additional emergency measures**

Emergency measure	Standards	Emergency measure	Standards
 Emergency shower	ANSI Z358-1 ISO 3864-1:2011, ISO 3864-4:2011	 Eyewash stations	DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2011

**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):	70,5 % weight
V.O.C. density at 20 °C:	568 kg/m <sup>3</sup> (568 g/L)
Average carbon number:	5
Average molecular weight:	72,2 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:	Aerosol
Appearance:	Volatile
Colour:	 Red
Odour:	Characteristic
Odour threshold:	Non-applicable *

**Volatility:**

Boiling point at atmospheric pressure:	Non-applicable *
Vapour pressure at 20 °C:	350000 Pa
Vapour pressure at 50 °C:	<300000 Pa (300 kPa)
Evaporation rate at 20 °C:	Non-applicable *

**Product description:**

Density at 20 °C:	801 kg/m <sup>3</sup>
Relative density at 20 °C:	Non-applicable *
Dynamic viscosity at 20 °C:	Non-applicable *
Kinematic viscosity at 20 °C:	Non-applicable *

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

**COPPER LUBRICANT**

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**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)**

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 *
Recipient pressure:	Non-applicable *

**Flammability:**

Flash Point:	Non-applicable
Flammability (solid, gas):	Non-applicable *
Autoignition temperature:	Non-applicable *
Lower flammability limit:	1,4 % Volume
Upper flammability limit:	10,9 % Volume

**Particle characteristics:**

Median equivalent diameter:	Non-applicable
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**9.2 Other information:**

**Information with regard to physical hazard classes:**

Explosive properties:	Non-applicable *
Oxidising properties:	Non-applicable *
Corrosive to metals:	Non-applicable *
Heat of combustion:	Non-applicable *
Aerosols-total percentage (by mass) of flammable components:	Non-applicable *

**Other safety characteristics:**

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 indicated conditions of storage, handling and use.

**10.3 Possibility of hazardous reactions:**

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

**10.4 Conditions to avoid:**

Applicable for handling and storage at room temperature:

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

**10.5 Incompatible materials:**

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

**COPPER LUBRICANT**

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**SECTION 10: STABILITY AND REACTIVITY (continued)**

**10.6 Hazardous decomposition products:**

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO<sub>2</sub>), carbon monoxide and other organic compounds.

**SECTION 11: TOXICOLOGICAL INFORMATION \*\***

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

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

**Dangerous health implications:**

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

A- Ingestion (acute effect):

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

B- Inhalation (acute effect):

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

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

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

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

E- Sensitizing effects:

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

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 hazardous 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. However, it does contain substances classified as hazardous for this effect. For more information see section 3.

**Other information:**

Non-applicable

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**SECTION 11: TOXICOLOGICAL INFORMATION \*\* (continued)**

**Specific toxicology information on the substances:**

Identification	Acute toxicity		Genus
pentane CAS: 109-66-0 EC: 203-692-4	LD50 oral	>2000 mg/kg	
	LD50 dermal	>2000 mg/kg	
	LC50 inhalation	>20 mg/L	
Propane CAS: 74-98-6 EC: 200-827-9	LD50 oral	>2000 mg/kg	
	LD50 dermal	>2000 mg/kg	
	LC50 inhalation	>5 mg/L	
Butane CAS: 106-97-8 EC: 203-448-7	LD50 oral	>2000 mg/kg	
	LD50 dermal	>2000 mg/kg	
	LC50 inhalation	658 mg/L (4 h)	Rat
Isobutane CAS: 75-28-5 EC: 200-857-2	LD50 oral	>2000 mg/kg	
	LD50 dermal	>2000 mg/kg	
	LC50 inhalation	>5 mg/L	
Copper powder CAS: 7440-50-8 EC: 231-159-6	LD50 oral	500 mg/kg (ATEi)	
	LD50 dermal	>2000 mg/kg	
	LC50 inhalation	>5 mg/L	

**Acute Toxicity Estimate (ATE mix):**

ATE mix		Ingredient(s) of unknown toxicity
Oral	16409,04 mg/kg (Calculation method)	0 %
Dermal	>2000 mg/kg (Calculation method)	Non-applicable
Inhalation	>20 mg/L (4 h) (Calculation method)	Non-applicable

**11.2 Information on other hazards:**

**Endocrine disrupting properties**

Endocrine-disrupting properties: The product fails to meet the criteria.

**Other information**

Non-applicable

\*\* Changes with regards to the previous version

**SECTION 12: ECOLOGICAL INFORMATION \*\***

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

**12.1 Toxicity:**

**Acute toxicity:**

Identification	Concentration		Species	Genus
pentane CAS: 109-66-0 EC: 203-692-4	LC50	Non-applicable		
	EC50	9,74 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	Non-applicable		
Copper powder CAS: 7440-50-8 EC: 231-159-6	LC50	>0.1 - 1 mg/L (96 h)		Fish
	EC50	>0.1 - 1 mg/L (48 h)		Crustacean
	EC50	>0.1 - 1 mg/L (72 h)		Algae

**12.2 Persistence and degradability:**

**Substance-specific information:**

Identification	Degradability		Biodegradability	
	pentane CAS: 109-66-0 EC: 203-692-4	BOD5	Non-applicable	Concentration
	COD	Non-applicable	Period	28 days
	BOD5/COD	Non-applicable	% Biodegradable	96 %

**12.3 Bioaccumulative potential:**

**Substance-specific information:**

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- CONTINUED ON NEXT PAGE -

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**COPPER LUBRICANT**

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Version: 7 (Replaced 6)

**SECTION 12: ECOLOGICAL INFORMATION \*\* (continued)**

Identification	Bioaccumulation potential	
pentane CAS: 109-66-0 EC: 203-692-4	BCF	171
	Pow Log	3.39
	Potential	High
Propane CAS: 74-98-6 EC: 200-827-9	BCF	13
	Pow Log	2.86
	Potential	Low
Butane CAS: 106-97-8 EC: 203-448-7	BCF	33
	Pow Log	2.89
	Potential	Moderate
Isobutane CAS: 75-28-5 EC: 200-857-2	BCF	27
	Pow Log	2.76
	Potential	Low

**12.4 Mobility in soil:**

Identification	Absorption/desorption		Volatility	
pentane CAS: 109-66-0 EC: 203-692-4	Koc	80	Henry	126656,25 Pa·m <sup>3</sup> /mol
	Conclusion	Very High	Dry soil	Yes
	Surface tension	1,547E-2 N/m (25 °C)	Moist soil	Yes
Propane CAS: 74-98-6 EC: 200-827-9	Koc	460	Henry	71636,78 Pa·m <sup>3</sup> /mol
	Conclusion	Moderate	Dry soil	Yes
	Surface tension	7,02E-3 N/m (25 °C)	Moist soil	Yes
Butane CAS: 106-97-8 EC: 203-448-7	Koc	900	Henry	96258,75 Pa·m <sup>3</sup> /mol
	Conclusion	Low	Dry soil	Yes
	Surface tension	1,187E-2 N/m (25 °C)	Moist soil	Yes
Isobutane CAS: 75-28-5 EC: 200-857-2	Koc	35	Henry	120576,75 Pa·m <sup>3</sup> /mol
	Conclusion	Very High	Dry soil	Yes
	Surface tension	9,84E-3 N/m (25 °C)	Moist soil	Yes

**12.5 Results of PBT and vPvB assessment:**

Product fails to meet PBT/vPvB criteria

**12.6 Endocrine disrupting properties:**

Endocrine-disrupting properties: The product fails to meet the criteria.

**12.7 Other adverse effects:**

Not described

\*\* Changes with regards to the previous version

**SECTION 13: DISPOSAL CONSIDERATIONS**

**13.1 Waste treatment methods:**

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

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

HP14 Ecotoxic, HP3 Flammable, HP5 Specific Target Organ Toxicity (STOT)/Aspiration Toxicity

**Waste management (disposal and evaluation):**

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

**COPPER LUBRICANT**

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Version: 7 (Replaced 6)

**SECTION 13: DISPOSAL CONSIDERATIONS (continued)**

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 2021 and RID 2021:



- 14.1 UN number or ID number:** UN1950
- 14.2 UN proper shipping name:** AEROSOLS
- 14.3 Transport hazard class(es):** 2  
Labels: 2.1
- 14.4 Packing group:** N/A
- 14.5 Environmental hazards:** Yes
- 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 Maritime transport in bulk according to IMO instruments:** Non-applicable

**Transport of dangerous goods by sea:**

With regard to IMDG 40-20:



- 14.1 UN number or ID number:** UN1950
- 14.2 UN proper shipping name:** AEROSOLS
- 14.3 Transport hazard class(es):** 2  
Labels: 2.1
- 14.4 Packing group:** N/A
- 14.5 Marine pollutant:** Yes
- 14.6 Special precautions for user**  
Special regulations: 63, 959, 190, 277, 327, 344  
EmS Codes: F-D, S-U  
Physico-Chemical properties: see section 9  
Limited quantities: 1 L  
Segregation group: Non-applicable
- 14.7 Maritime transport in bulk according to IMO instruments:** Non-applicable

**Transport of dangerous goods by air:**

With regard to IATA/ICAO 2023:



- 14.1 UN number or ID number:** UN1950
- 14.2 UN proper shipping name:** AEROSOLS
- 14.3 Transport hazard class(es):** 2  
Labels: 2.1
- 14.4 Packing group:** N/A
- 14.5 Environmental hazards:** Yes
- 14.6 Special precautions for user**  
Physico-Chemical properties: see section 9
- 14.7 Maritime transport in bulk according to IMO instruments:** Non-applicable

**SECTION 15: REGULATORY INFORMATION**

Safety data sheet

This SDS is an English translation of COMMISSION REGULATION (EU) 2020/878, without any country-specific legislation

**COPPER LUBRICANT**

Printing: 26/01/2023

Date of compilation: 26/06/2011

Revised: 26/01/2023

Version: 7 (Replaced 6)

**SECTION 15: REGULATORY INFORMATION (continued)**

**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: Copper powder (Product-type 2, 5, 11, 21)

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	FLAMMABLE AEROSOLS	150	500
E1	ENVIRONMENTAL HAZARDS	100	200

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

Shall not be used in:

- ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,
- tricks and jokes,
- games for one or more participants, or any article intended to be used as such, even with ornamental aspects.

**Specific provisions in terms of protecting people or the environment:**

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

**Other legislation:**

The product could be affected by sectorial legislation

Council Directive 75/324/EEC of 20 May 1975 on the approximation of the laws of the Member States relating to aerosol dispensers

Commission Directive 94/1/EC of 6 January 1994 adapting some technicalities of Council Directive 75/324/EEC on the approximation of the laws of the relating Member States to aerosol dispensers

Commission Directive 2008/47/EC of 8 April 2008 amending, for the purposes of adapting to technical progress, Council Directive 75/324/EEC on the approximation of the laws of the Member States relating to aerosol dispensers

Commission Directive 2013/10/EU 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

COMMISSION DIRECTIVE (EU) 2016/2037 of 21 November 2016 amending Council Directive 75/324/EEC as regards the maximum allowable pressure of aerosol dispensers and 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

**15.2 Chemical safety assessment:**

The supplier has not carried out evaluation of chemical safety.

**SECTION 16: OTHER INFORMATION**

**Legislation related to safety data sheets:**

The SDS shall be supplied in an official language of the country where the product is placed on the market. This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) No 1907/2006 (COMMISSION REGULATION (EU) 2020/878).

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

COMMISSION REGULATION (EU) 2020/878

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

- New declared substances
  - Propane (74-98-6)
  - Butane (106-97-8)
  - Isobutane (75-28-5)

**Texts of the legislative phrases mentioned in section 2:**

## COPPER LUBRICANT

Printing: 26/01/2023

Date of compilation: 26/06/2011

Revised: 26/01/2023

Version: 7 (Replaced 6)

### SECTION 16: OTHER INFORMATION (continued)

H336: May cause drowsiness or dizziness.  
H411: Toxic to aquatic life with long lasting effects.  
H400: Very toxic to aquatic life.  
H229: Pressurised container: May burst if heated.  
H222: Extremely flammable aerosol.

#### Texts of the legislative phrases mentioned in section 3:

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

#### CLP Regulation (EC) No 1272/2008:

Acute Tox. 4: H302 - Harmful if swallowed.  
Aquatic Acute 1: H400 - Very toxic to aquatic life.  
Aquatic Chronic 2: H411 - Toxic to aquatic life with long lasting effects.  
Asp. Tox. 1: H304 - May be fatal if swallowed and enters airways.  
Flam. Gas 1A: H220 - Extremely flammable gas.  
Flam. Liq. 2: H225 - Highly flammable liquid and vapour.  
Press. Gas: H280 - Contains gas under pressure, may explode if heated.  
STOT SE 3: H336 - May cause drowsiness or dizziness.

#### Classification procedure:

STOT SE 3: Calculation method  
Aquatic Chronic 2: Calculation method  
Aquatic Acute 1: Calculation method  
Aerosol 1: Calculation method  
Aerosol 1: Calculation method

#### Advice related to training:

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

#### Principal bibliographical sources:

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

#### Abbreviations and acronyms:

ADR: European agreement concerning the international carriage of dangerous goods by road  
IMDG: International maritime dangerous goods code  
IATA: International Air Transport Association  
ICAO: International Civil Aviation Organisation  
COD: Chemical Oxygen Demand  
BOD5: 5day biochemical oxygen demand  
BCF: Bioconcentration factor  
LD50: Lethal Dose 50  
LC50: Lethal Concentration 50  
EC50: Effective concentration 50  
LogPOW: Octanolwater partition coefficient  
Koc: Partition coefficient of organic carbon  
UFI: unique formula identifier  
IARC: International Agency for Research on Cancer

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation at European and state level, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product, it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

- END OF SAFETY DATA SHEET -