

The safety data sheet complies with Commission Regulation (EU) 878/2020 of 18 June 2020 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) .

## ZOS

Creation date	22nd October 2003	Version	15
Revision date	30th November 2022		

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

**1.1. Product identifier**  
Substance / mixture

ZOS  
mixture

**1.2. Relevant identified uses of the substance or mixture and uses advised against**  
**Mixture's intended use**

Zinc protective spray

**The use descriptors**

IS Use at industrial sites  
PW Widespread use by professional workers

**Mixture uses advised against**

The product should not be used in ways other than those referred in Section 1.

**1.3. Details of the supplier of the safety data sheet**

**Supplier**

Name or trade name	NOVATO
Address	Uralská 770/6, Praha, 160 00 Czech Republic
Identification number (CRN)	62910370
VAT Reg No	CZ62910370
Phone	+420 233 339 688
E-mail	petr.johanides@novato.cz
Web address	www.novato.cz

**Competent person responsible for the safety data sheet**

Name	ABITEC
E-mail	info@abitec.cz

**1.4. Emergency telephone number**

European emergency number: 112

### SECTION 2: Hazards identification

**2.1. Classification of the substance or mixture**

**Classification of the mixture in accordance with Regulation (EC) No 1272/2008**

The mixture is classified as dangerous.

Aerosol 1, H229, H222  
Eye Irrit. 2, H319  
Aquatic Acute 1, H400  
Aquatic Chronic 1, H410

**Most serious adverse physico-chemical effects**

The mixture is extremely flammable. The container is under pressure: do not expose to sunlight and temperatures above 50 °C. Do not even puncture the empty container or throw it into the fire. Do not spray on open flames or hot objects. Keep away from sources of ignition - No smoking. Keep out of reach of children. Incomplete combustion can release dangerous gases. Solvent vapors are heavier than air, they accumulate in lower positions. They can form an explosive mixture when mixed with air.

**Most serious adverse effects on human health and the environment**

Inhaling the aerosol can cause headaches, fatigue. Do not inhale the aerosol. It irritates the skin (redness, itching, burning and even dermatitis). Direct eye contact causes eye irritation (watering, burning, itching, redness and conjunctivitis). The mixture may, depending on individual sensitivity, cause an allergic skin reaction (contact dermatitis - redness, swelling, pimples, blisters). Frequent or long-term contact with the skin causes drying or cracking of the skin or even dermatitis. The mixture is classified as harmful to the environment. Follow the instructions for use to avoid risks to people and the environment. The liquid is lighter than water and can cover the surface of the water. Avoid release to soil, ground or surface water or sewers. The full wording of the classification and H phrases is given in Sect. 16 of this safety data sheet.

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### 2.2. Label elements

#### Hazard pictogram



#### Signal word

Danger

#### Hazard statements

H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.
H319	Causes serious eye irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

#### 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.
P260	Do not breathe vapours/spray.
P273	Avoid release to the environment.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C.

#### Supplemental information

EUH066 Repeated exposure may cause skin dryness or cracking.

### 2.3. Other hazards

Neither the mixture nor its components meet the criteria for persistent, bioaccumulative and toxic or highly persistent and highly bioaccumulative substances in accordance with Annex XIII, nor have they been included in the list drawn up in accordance with Article 59, paragraph 1, due to the content of endocrine disruptors, nor has it been determined as a substance with endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

#### Chemical characterization

Mixture.

#### Mixture contains these hazardous substances and substances with the highest permissible concentration in the working environment

Identification numbers	Substance name	Content in % weight	Classification according to Regulation (EC) No 1272/2008	Note
Index: 030-001-01-9 CAS: 7440-66-6 EC: 231-175-3	zinc powder - zinc dust (stabilised)	25-50	Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Specific concentration limit: Aquatic Acute 1, H400: C ≥ 25 %	
Index: 603-019-00-8 CAS: 115-10-6 EC: 204-065-8 Registration number: 01-21194772128-37	dimethyl ether	25-50	Flam. Gas 1, H220 Press. Gas (compressed gas), H280	2, 4

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Identification numbers	Substance name	Content in % weight	Classification according to Regulation (EC) No 1272/2008	Note
Index: 606-001-00-8 CAS: 67-64-1 EC: 200-662-2	acetone	10-12,5	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 Specific concentration limit: Eye Irrit. 2, H319: C ≥ 10 % STOT SE 3, H336: C ≥ 20 %	4
Index: 601-022-00-9 CAS: 1330-20-7 EC: 215-535-7	xylene	5-10	Flam. Liq. 3, H226 Acute Tox. 4, H312+H332 Skin Irrit. 2, H315 Specific concentration limit: Skin Irrit. 2, H315: C ≥ 10 % Acute Tox. 4, H312+H332: C ≥ 12.5 %	1, 4, 5
EC: 918-668-5 Registration number: 01-2119455851-35	hydrocarbons, C9, aromatized	5-10	Flam. Liq. 3, H226 Asp. Tox. 1, H304 STOT SE 3, H335, H336 Aquatic Chronic 2, H411 Specific concentration limit: Asp. Tox. 1, H304: C ≥ 10 % STOT SE 3, H335, H336: C ≥ 20 %	3, 4
Index: 030-013-00-7 CAS: 1314-13-2 EC: 215-222-5	zinc oxide	0,25-1	Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Specific concentration limit: Aquatic Acute 1, H400; Aquatic Chronic 1, H410: C ≥ 25 %	

### Notes

- 1 Note C: Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.
- 2 Note U (Table 3): When put on the market gases have to be classified as "Gases under pressure", in one of the groups compressed gas, liquefied gas, refrigerated liquefied gas or dissolved gas. The group depends on the physical state in which the gas is packaged and therefore has to be assigned case by case. The following codes are assigned:
  - Press. Gas (Comp.)
  - Press. Gas (Liq.)
  - Press. Gas (Ref. Liq.)
  - Press. Gas (Diss.)

Aerosols shall not be classified as gases under pressure (See Annex I, Part 2, Section 2.3.2.1, Note 2).
- 3 Note 1: The concentration stated or, in the absence of such concentrations, the generic concentrations set out in this Regulation are the percentages by weight of the metallic element calculated with reference to the total weight of the mixture.
- 4 A substance for which exposure limits are set.
- 5 Substance for which biological limit values exist.

Full text of all classifications and hazard statements is given in the section 16.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

In case of health problems or in case of doubt, consult a physician and provide him with the information in this safety data sheet. In case of life-threatening conditions, perform resuscitation. Keep unconscious person in a stabilized position and do not give anything by mouth. Avoid cooling. Do not induce vomiting. In case of spontaneous vomiting, avoid inhalation of vomitus. If burns occur, cool the burn with cold water and cover with a clean cloth.

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### If inhaled

If inhaled, leave the area, rinse the mouth with water, inhale fresh air. If breathing is difficult, give first aid and seek medical advice.

### If on skin

Wipe the product, wash thoroughly with lukewarm water, soap and treat with regenerating cream. If clothing is contaminated, remove clothing. Seek medical attention if irritation develops.

### If in eyes

If the affected person has contact lenses, remove them. Flush eyes wide open from the inner corner of the eye towards the outside with plenty of clean lukewarm water, especially the area under the eyelids. Rinse for at least 15 minutes, seek medical attention.

### If swallowed

In the case of an aerosol product, ingestion is very unlikely. Do not induce vomiting, rinse mouth with water. Seek medical attention immediately and present this safety data sheet. Danger of vomiting!

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

### If inhaled

Inhalation of the aerosol can cause headaches, fatigue, drowsiness, malaise, even narcotic states, exceptionally unconsciousness. Inhalation into the lungs, swelling of the lungs.

### If on skin

The mixture shows skin sensitization, can cause an allergic reaction (rash, dermatitis, eczematous manifestations). Frequent or long-term contact with the skin causes drying or cracking of the skin or even dermatitis. Danger of frostbite in contact with liquid gas.

### If in eyes

Irritating to the eyes (watering, burning, itching, redness and conjunctivitis).

### If swallowed

not available

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

Immediate medical attention is not required during normal use of the mixture. Required only if symptoms reach a certain level, as indicated in paragraphs 4.1 and 4.2; is symptomatic.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

#### Suitable extinguishing media

Multipurpose powders, CO<sub>2</sub>, foam, water mist, sand.

#### Unsuitable extinguishing media

Full stream of water. Crushed water can be used to cool the containers near the fire.

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

Extremely flammable mixture. Incomplete combustion or thermal decomposition can produce toxic gases (CO<sub>x</sub>, hydrocarbons, thick smoke, etc.). Do not inhale decomposition products. Vapors are heavier than air, accumulate in lower positions, can spread over long distances. When mixed with air, they can form an explosive mixture. Danger of re-ignition. There is a risk of the pressure vessel exploding at higher temperatures.

### 5.3. Advice for firefighters

Isolation breathing apparatus and non-flammable intervention suit. Use non-sparking tools. Cool containers exposed to fire with water spray or foam. Burning residues and post-intervention water should be disposed of as hazardous waste.

## SECTION 6: Accidental release measures

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

Prevent unauthorized entry, ensure free escape. Ensure adequate ventilation, do not breathe aerosol. Eliminate possible sources of ignition, do not smoke, do not handle open flame, do not expose to direct sunlight. Use non-sparking tools, avoid electrostatic charge. Avoid contact with skin and eyes - use personal protective equipment.

### 6.2. Environmental precautions

Provide a spill area, prevent leakage into drains, soil, surface and ground water. In case of a large liquid leak, monitor the NPK concentrations resp. TLV and inform the relevant public authorities and the flow or sewerage manager.

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

Stop the leak. In case of large leakage of liquid fraction, drain the mixture. The aerosol evaporates, ensure adequate ventilation. In case of a minor leakage of the liquid fraction, cover with a non-flammable sorbent (sand, diatomaceous earth, soil, universal sorbent, etc.), store the used sorbent in a closable waste container, mark it and dispose of it as hazardous waste. Wash contaminated area with water.

### 6.4. Reference to other sections

See the Section 7, 8 and 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Ensure adequate ventilation of the work area. Avoid contact with open flames and other sources of ignition. Protect against direct sunlight. Use non-sparking tools. Take precautionary measures against static discharge. Avoid the formation of gases and vapors in flammable or explosive concentrations and concentrations exceeding the maximum permissible concentrations (NPK-P) for the working atmosphere. Protect eyes and skin, do not breathe aerosol or fumes, use personal protective equipment according to section 8. Observe valid legal regulations on safety and health protection. Follow the principles of hygiene when working with chemicals, do not eat, drink or smoke while working. Wash hands with warm soap and water before breaks, meals and after work.

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

Store in original containers at temperatures up to 50 ° C in dry, well-ventilated areas. Store away from heat, protect from direct sunlight and external weather conditions. Store away from food, drink and animal feeding stuffs. Store separately as flammable. No smoking. Observe the general regulations for storage of pressure vessels. Follow the instructions on the label.

Content	Packaging type	Material of package
400 ml	aerosol can	FE

Storage class 2B - Aerosols  
Storage temperature max. 50 °C

### 7.3. Specific end use(s)

It is not.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Ensure compliance with governmental regulation 361/2007 Coll., Laying down the conditions for the protection of health at work, as amended, and to fulfill the obligations contained therein.

#### Czech Republic

#### Government Regulation 330/2023 Coll.

Substance name (component)	Type	Value	Note
dimethyl ether (CAS: 115-10-6)	PEL	1000 mg/m <sup>3</sup>	
	PEL	522 ppm	
	NPK-P	2000 mg/m <sup>3</sup>	
	NPK-P	1045 ppm	
acetone (CAS: 67-64-1)	PEL	800 mg/m <sup>3</sup>	irritating to mucous membranes (eyes, respiratory system) and skin
	PEL	331,4 ppm	
	NPK-P	1500 mg/m <sup>3</sup>	
	NPK-P	621,4 ppm	

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### Czech Republic

### Government Regulation 330/2023 Coll.

Substance name (component)	Type	Value	Note
xylene (CAS: 1330-20-7)	PEL	200 mg/m <sup>3</sup>	skin penetration is significantly involved during exposure, irritating to mucous membranes (eyes, respiratory system) and skin
	PEL	45,33 ppm	
	NPK-P	400 mg/m <sup>3</sup>	
	NPK-P	90,66 ppm	
hydrocarbons, C9, aromatized	PEL	200 mg/m <sup>3</sup>	
	NPK-P	1000 mg/m <sup>3</sup>	

### European Union

### Commission Directive 2000/39/EC

Substance name (component)	Type	Value	Note
dimethyl ether (CAS: 115-10-6)	OEL 8 hours	1920 mg/m <sup>3</sup>	
	OEL 8 hours	1000 ppm	
acetone (CAS: 67-64-1)	OEL 8 hours	1210 mg/m <sup>3</sup>	
	OEL 8 hours	500 ppm	
xylene (CAS: 1330-20-7)	OEL 8 hours	221 mg/m <sup>3</sup>	Skin
	OEL 8 hours	50 ppm	
	OEL 15 minutes	442 mg/m <sup>3</sup>	
	OEL 15 minutes	100 ppm	

### Biological limit values

### Czech Republic

### Decree No. 107/2017 Coll.

Name	Parameter	Value	Tested material	Time of sampling
xylene (CAS: 1330-20-7)	Methylhippuric acids	1400 mg/g of creatinine	Urine	End of shift
		820 μmol/mmol creatinine		

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### DNEL

acetone					
Workers / consumers	Route of exposure	Value	Effect	Value determination	Source
Workers	Inhalation	1210 mg/m <sup>3</sup>	Chronic effects systemic		
Workers	Inhalation	2420 mg/m <sup>3</sup>	Acute effects local		
Workers	Dermal	186 mg/kg/24h	Chronic effects systemic		

dimethyl ether					
Workers / consumers	Route of exposure	Value	Effect	Value determination	Source
Workers		1894 mg/m <sup>3</sup>	Chronic effects systemic		

hydrocarbons, C9, aromatized					
Workers / consumers	Route of exposure	Value	Effect	Value determination	Source
Workers	Inhalation	150 mg/m <sup>3</sup>	Chronic effects systemic		
Workers	Dermal	25 mg/kg/24h	Chronic effects systemic		

xylene					
Workers / consumers	Route of exposure	Value	Effect	Value determination	Source
Workers	Inhalation	77 mg/m <sup>3</sup>	Chronic effects systemic		
Workers	Inhalation	442 mg/m <sup>3</sup>	Acute effects local		
Workers	Inhalation	289 mg/m <sup>3</sup>	Acute effects systemic		
Workers	Inhalation	289 mg/m <sup>3</sup>	Acute effects local		
Workers	Dermal	180 mg/kg/24h	Chronic effects systemic		

zinc oxide					
Workers / consumers	Route of exposure	Value	Effect	Value determination	Source
Workers	Inhalation	5 mg/m <sup>3</sup>	Chronic effects systemic		
Workers	Dermal	83 mg/kg/24h	Chronic effects systemic		

zinc powder - zinc dust (stabilised)					
Workers / consumers	Route of exposure	Value	Effect	Value determination	Source
Workers	Inhalation	5 mg/m <sup>3</sup>	Chronic effects systemic		
Workers	Dermal	83 mg/kg/24h	Chronic effects systemic		

### PNEC

acetone			
Route of exposure	Value	Value determination	Source
Freshwater environment	10.6 mg/l		
Marine water	1.06 mg/l		

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acetone			
Route of exposure	Value	Value determination	Source
Freshwater sediment	30.4 mg/kg		
Sea sediments	3.04 mg/kg		

dimethyl ether			
Route of exposure	Value	Value determination	Source
Microorganisms in sewage treatment	160 mg/l		
Freshwater environment	0.155 mg/l		
Marine water	0.016 mg/l		
Freshwater sediment	0.681 mg/kg		
Sea sediments	0.069 mg/kg		

xylene			
Route of exposure	Value	Value determination	Source
Freshwater environment	0.327 mg/l		
Marine water	0.327 mg/l		
Freshwater sediment	12.46 mg/kg		
Sea sediments	12.46 mg/kg		

zinc oxide			
Route of exposure	Value	Value determination	Source
Freshwater environment	0.0206 mg/l		
Marine water	0.0061 mg/l		
Freshwater sediment	117.8 mg/kg		
Sea sediments	56.5 mg/kg		

zinc powder - zinc dust (stabilised)			
Route of exposure	Value	Value determination	Source
Microorganisms in sewage treatment	100 µg/l		
Freshwater environment	20.6 µg/l		
Marine water	6.1 µg/l		
Soil (agricultural)	35.6 mg/kg		
Freshwater sediment	117.8 mg/kg		
Sea sediments	56.5 mg/kg		



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### 8.2. Exposure controls

Ensure sufficient ventilation or extraction of the work area. In case of exceeding the NPK-P, use suitable respiratory protection. Avoid contact with skin and eyes, do not inhale aerosols, gases and vapors. Observe hygienic measures when working with chemicals. Do not eat, drink and smoke during work. Wash hands with lukewarm soap and water before breaks, meals and after work. Adapt personal protective equipment to the nature of the work.

#### Eye/face protection

Closed safety glasses.

#### Skin protection

Protective work clothes made of non-flammable material, antistatic treatment is suitable. Wash affected skin, remove contaminated clothing, wash before further use. Chemically resistant protective gloves (material e.g. nitrile rubber, PVA, fluororubber).

It is recommended to assume solvent resistance for 42 minutes. Taking into account the concentrations of the components, a longer period of resistance can be assumed in individual cases. When choosing, follow the manufacturer's recommendations, the material must be impermeable and resistant to the components of the mixture. Test at a specific workplace before first use. Replace damaged gloves.

#### Respiratory protection

It is not necessary under normal conditions. In case of increased risk of inhalation and insufficient ventilation use a mask with a filter against organic vapors and aerosols, type A. In the event of an accident or for long-term exposure, use a self-contained breathing apparatus.

#### Thermal hazard

Exposure to elevated temperatures may result in tearing of the aerosol container when overheating.

#### Environmental exposure controls

It is not necessary if handling conditions are observed. Observe normal environmental precautions, do not allow to enter drains, soil or water sources.

#### More information

Ensure compliance with governmental regulation 361/2007 Coll., Laying down the conditions for the protection of health at work, as amended, and to fulfill the obligations contained therein.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	liquid
Colour	grey
Odour	characteristic
Melting point/freezing point	data not available
Boiling point or initial boiling point and boiling range	data not available
Flammability	Flammable Class I.
Lower and upper explosion limit	
bottom	2.6 %
upper	26.6 %
Flash point	<0 °C
Auto-ignition temperature	>230 °C
Decomposition temperature	data not available
pH	data not available
Kinematic viscosity	data not available
Solubility in water	insoluble
Partition coefficient n-octanol/water (log value)	data not available
Vapour pressure	4 hPa at 20 °C
Density and/or relative density	
Density	1.17 g/cm <sup>3</sup> at 20 °C
Relative vapour density	data not available
Particle characteristics	data not available

### 9.2. Other information

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VOC content: 55,84 % (654,4 g/l)  
 Solvent vapors can form an explosive mixture when mixed with air.  
 Soluble in common organic solvents.  
 Content of organic solvents: 55.8%  
 Content of non-volatile substances: 45.5%

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

The mixture is flammable. In normal conditions, the mixture does not show dangerous reactions.

#### 10.2. Chemical stability

The mixture is stable under normal environmental conditions, storage and handling.

#### 10.3. Possibility of hazardous reactions

May react with strong acids, bases and oxidizing agents. There is a risk of the pressure vessel exploding when exposed to high temperatures. Propellant gases and solvent vapors can form an explosive mixture when mixed with air.

#### 10.4. Conditions to avoid

To temperatures above 50 °C, contact with open flames, possible sources of ignition and hot surfaces, sparks, direct sunlight, accumulation of static electricity. Formation of concentration within explosive limits. Vapors are heavier than air, accumulate in lower positions, can spread over long distances. They can form an explosive mixture when mixed with air. Risk of re-ignition. There is a risk of the pressure vessel exploding at higher temperatures.

#### 10.5. Incompatible materials

Flammable materials, strong oxidizing agents, strong acids and bases.

#### 10.6. Hazardous decomposition products

Under normal conditions, the mixture does not decompose. Imperfect combustion or thermal decomposition produces toxic combustion products: COx, heavy smoke, hydrocarbons, etc.

### SECTION 11: Toxicological information

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

The mixture meets the criteria for classification according to EC Regulation No. 1272/2008. The mixture is classified as dangerous in the sense of EC Regulation No. 1272/2008, as amended.

#### Acute toxicity

The mixture is not classified as acutely toxic by any route of exposure. Contains acutely toxic component in an amount below the specified concentration limit.

acetone					
Route of exposure	Parameter	Value	Exposure time	Species	Sex
Oral	LD <sub>50</sub>	5800 mg/kg		Rat	
Dermal	LD <sub>50</sub>	20000 mg/kg		Rabbit	
Inhalation	LD <sub>50</sub>	50.1 mg/l	8 hours	Rat	

dimethyl ether					
Route of exposure	Parameter	Value	Exposure time	Species	Sex
Inhalation	LC <sub>50</sub>	308.5 mg/l	4 hours	Rat (Rattus norvegicus)	
Dermal	LD <sub>50</sub>	>8000 mg/kg		Rabbit	
Inhalation	LC <sub>50</sub>	>5000 ppm	6 hours	Rat (Rattus norvegicus)	

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hydrocarbons, C9, aromatized					
Route of exposure	Parameter	Value	Exposure time	Species	Sex
Oral	LD <sub>50</sub>	>5000 mg/kg		Rat (Rattus norvegicus)	
Dermal	LD <sub>50</sub>	>2000 mg/kg		Rabbit	
Inhalation	LC <sub>50</sub>	>7630 mg/m <sup>3</sup>	4 hours	Rat (Rattus norvegicus)	

xylene					
Route of exposure	Parameter	Value	Exposure time	Species	Sex
Oral	LD <sub>50</sub>	3523-8700 mg/kg		Rat (Rattus norvegicus)	
Dermal	LD <sub>50</sub>	1134 mg/kg		Rabbit	
Inhalation	LC <sub>50</sub>	5000-6350 ppm	4 hours	Rat (Rattus norvegicus)	

zinc powder - zinc dust (stabilised)					
Route of exposure	Parameter	Value	Exposure time	Species	Sex
Oral	LD <sub>50</sub>	>2000 mg/kg		Rat (Rattus norvegicus)	
Inhalation	LC <sub>50</sub>	>5410 mg/m <sup>3</sup>	14 days	Rat (Rattus norvegicus)	

### Skin corrosion/irritation

Based on the available data, the classification criteria are not met. Prolonged contact with the skin can dry out the skin and cause cracking.

### Serious eye damage/irritation

The mixture is classified as eye irritant, category 2.

### 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.

### Toxicity for specific target organ - single exposure

Based on the available data, the classification criteria are not met. The mixture contains sublimit amount of substances classified as narcotic. Inhalation of vapors or aerosol may cause headache, drowsiness or dizziness, malaise, even narcotic conditions.

### Toxicity for specific target organ - repeated exposure

Based on available data the classification criteria are not met.

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### Aspiration hazard

Based on available data the classification criteria are not met.

### 11.2. Information on other hazards

It does not contain substances causing disruption of the endocrine system. Inhalation of the aerosol can cause headaches, fatigue, drowsiness, malaise, even narcotic states, exceptionally irritation of the mucous membranes and respiratory tract. Do not inhale the aerosol. It irritates the eyes (watering, burning, itching, redness). Frequent or long-term contact with the skin causes drying or cracking of the skin or even dermatitis.

## SECTION 12: Ecological information

### 12.1. Toxicity

The ecotoxic effects of the mixture itself were not assessed. Prevent the liquid from leaking into sewers and underground or surface water.

#### Acute toxicity

acetone				
Parameter	Value	Exposure time	Species	Environment
LC <sub>50</sub>	4600 mg/l	48 hours	Fish	
EC <sub>50</sub>	5091 mg/l	48 hours	Invertebrates (Daphnia magna)	
LC <sub>50</sub>	3220 mg/l	96 hours	Fish (Poecilia reticulata)	

dimethyl ether				
Parameter	Value	Exposure time	Species	Environment
NOEC	>4000 mg/l	48 hours	Invertebrates (Daphnia magna)	
LC <sub>50</sub>	>4000 mg/l	48 hours	Fish	

hydrocarbons, C9, aromatized				
Parameter	Value	Exposure time	Species	Environment
LC <sub>50</sub>	15 mg/l	96 hours	Fish	
EC <sub>50</sub>	4.5 mg/l	48 hours	Invertebrates (Daphnia magna)	

xylene				
Parameter	Value	Exposure time	Species	Environment
LC <sub>50</sub>	26.7 mg/l	96 hours	Fish (Poecilia reticulata)	
EC <sub>50</sub>	75.49 mg/l	24 hours	Invertebrates (Daphnia magna)	
LC <sub>50</sub>	86-308 mg/l	48 hours	Fish (Leuciscus idus)	
EC <sub>50</sub>	72 mg/l	14 days	Algae (Pseudokirchneriella subcapitata)	

zinc powder - zinc dust (stabilised)				
Parameter	Value	Exposure time	Species	Environment
LC <sub>50</sub>	439 µg/l	96 hours	Fish (C. bairdi)	
EC <sub>50</sub>	1833 µg/l	48 hours	Invertebrates (Daphnia magna)	

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### 12.2. Persistence and degradability

The mixture is partially biodegradable.

### 12.3. Bioaccumulative potential

Not determined, bioaccumulation is unlikely.

### 12.4. Mobility in soil

The mixture evaporates easily (low mobility).

### 12.5. Results of PBT and vPvB assessment

The mixture does not contain substances from the PBT and vPvB groups according to Annex XIII of the REACH Regulation, as amended.

### 12.6. Endocrine disrupting properties

Substances with these properties in accordance with the criteria set out in Commission Regulation (EU) 2017/2100 or (EU) 2018/605 are not included.

### 12.7. Other adverse effects

The mixture is harmful to the environment, even a small amount can contaminate drinking water sources. It must not get into the soil, underground or surface water or sewage system. Observe the usual environmental protection measures.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Dispose of as hazardous waste. Dispose of at an authorized person or to a hazardous waste collection yard. Dispose of mixture and packaging residues in accordance with local waste disposal regulations. Dispose of contaminated packaging as hazardous waste.

#### Waste management legislation

Act No. 477/2001 Coll., On Packaging, as amended. Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste, as amended.

#### Waste type code

14 06 03\* other solvents and solvent mixtures

08 01 11\* waste paint and varnish containing organic solvents or other hazardous substances

#### Packaging waste type code

15 01 11\* metallic packaging containing a hazardous solid porous matrix (for example asbestos), including empty pressure containers

15 01 10\* packaging containing residues of or contaminated by hazardous substances

(\* ) - Hazardous waste according to Directive 2008/98/EC on hazardous waste

## SECTION 14: Transport information

### 14.1. UN number or ID number

UN 1950

### 14.2. UN proper shipping name

AEROSOLS

### 14.3. Transport hazard class(es)

2 Gases

### 14.4. Packing group

not relevant

### 14.5. Environmental hazards

No.

### 14.6. Special precautions for user

Transport in packages that match the properties of the mixture. Observe the prescribed marking for cargo.

### 14.7. Maritime transport in bulk according to IMO instruments

Can not be used.

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### Additional information

Hazard identification No.  
UN number  
Classification code  
Safety signs



5F  
2.1+hazardous for the environment



### Road transport - ADR

Special provisions 190, 327, 344, 625  
Limited quantities 1 L  
Excepted quantities E0

#### Packaging

Packing instructions P207, LP200  
Special packing provisions PP87, RR6, L2  
Mixed packing provisions MP9  
Transport category 2  
Tunnel restriction code (D)

#### Special provision for packages

V14  
loading, unloading and handling operation CV9, CV12  
S2

### Railway transport - RID

Special provisions 190, 327, 344, 625  
Excepted quantities E0

#### Packaging

Packing instructions P207, LP200  
Special packing provisions PP87, RR6, L2  
Mixed packing provisions MP9  
Transport category 0

#### Special provision for packages

W14  
loading, unloading and handling CW9, CW12

### Air transport - ICAO/IATA

Packaging instructions for limited amount Y203  
Packaging instructions passenger 203  
Cargo packaging instructions 203

### Marine transport - IMDG

EmS (emergency plan) F-D, S-U  
MFAG 620

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### SECTION 15: Regulatory information

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

Parliament and of the Council of 18th December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing the 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, as amended. COMMISSION REGULATION (EU) 2020/878 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH). Commission Delegated Regulation (EU) 2021/849 of 11 March 2021 amending, for the purposes of adapting to technical and scientific progress, Part 3 of Annex VI to Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labeling and packaging of substances and mixtures. REGULATION (EC) No 648/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 31 March 2004 on detergents, as amended. Commission Regulation (EU) No 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorization and Restriction of Chemicals.

#### 15.2. Chemical safety assessment

No chemical hazard assessment was performed for this mixture.

##### More information

This information only indicates the basic regulations listed in this Safety Data Sheet. Please note the possible existence of additional regulations supplementing these Regulations. We refer to all applicable national, international and local regulations and regulations.

### SECTION 16: Other information

#### A list of standard risk phrases used in the safety data sheet

H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H229	Pressurised container: May burst if heated.
H280	Contains gas under pressure; may explode if heated.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H312+H332	Harmful in contact with skin or if inhaled.

#### Guidelines for safe handling used in the safety data sheet

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P260	Do not breathe vapours/spray.
P273	Avoid release to the environment.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C.

#### A list of additional standard phrases used in the safety data sheet

EUH066	Repeated exposure may cause skin dryness or cracking.
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#### Other important information about human health protection

The mixture should not be used for any purpose other than that for which it is intended (see point 1.2). Because the supplier can not control the specific conditions of use of the mixture, it is the responsibility of the user to adapt the prescribed warnings to local laws and regulations. Safety information describes the product in terms of safety and can not be considered as technical product information.

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### Key to abbreviations and acronyms used in the safety data sheet

ADR	European agreement concerning the international carriage of dangerous goods by road
BCF	Bioconcentration Factor
CAS	Chemical Abstracts Service
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substance and mixtures
EC	Identification code for each substance listed in EINECS
EC <sub>50</sub>	Concentration of a substance when it is affected 50% of the population
EINECS	European Inventory of Existing Commercial Chemical Substances
EmS	Emergency plan
EU	European Union
EuPCS	European Product Categorisation System
IATA	International Air Transport Association
IBC	International Code For The Construction And Equipment of Ships Carrying Dangerous Chemicals
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
INCI	International Nomenclature of Cosmetic Ingredients
ISO	International Organization for Standardization
IUPAC	International Union of Pure and Applied Chemistry
LC <sub>50</sub>	Lethal concentration of a substance in which it can be expected death of 50% of the population
LD <sub>50</sub>	Lethal dose of a substance in which it can be expected death of 50% of the population
log K <sub>ow</sub>	Octanol-water partition coefficient
NOEC	No observed effect concentration
NPK	Maximum admissible concentration
OEL	Occupational Exposure Limits
PBT	Persistent, Bioaccumulative and Toxic
PEL	Permissible Exposure Limit
ppm	Parts per million
Press. Gas (Comp.)	Gas under pressure: compressed gas
Press. Gas (Diss.)	Gas under pressure: dissolved gas
Press. Gas (Liq.)	Gas under pressure: liquefied gas
Press. Gas (Ref. Liq.)	Gas under pressure: refrigerated liquefied gas
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Agreement on the transport of dangerous goods by rail
UN	Four-figure identification number of the substance or article taken from the UN Model Regulations
UVCB	Substances of unknown or variable composition, complex reaction products or biological materials
VOC	Volatile organic compounds
vPvB	Very Persistent and very Bioaccumulative
Acute Tox.	Acute toxicity
Aerosol	Aerosol
Aquatic Acute	Hazardous to the aquatic environment
Aquatic Chronic	Hazardous to the aquatic environment (chronic)
Asp. Tox.	Aspiration hazard
Eye Irrit.	Eye irritation
Flam. Gas	Flammable gas
Flam. Liq.	Flammable liquid





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Press. Gas	Gases under pressure
Skin Irrit.	Skin irritation
STOT SE	Specific target organ toxicity - single exposure

### Training guidelines

According to § 103 and § 104 of Act No. 262/2006 Coll., The Labor Code, as amended. Inform the personnel about the recommended ways of use, mandatory protective equipment, first aid and prohibited ways of handling the product.

### Recommended restrictions of use

The mixture should not be used for any purpose other than that for which it is intended (see point 1.2). Because the specific conditions of use of the substance are beyond the control of the supplier, it is the responsibility of the user to adapt the prescribed warnings to local laws and regulations. Safety information describes the product in terms of safety and can not be considered as technical product information.

### Information about data sources used to compile the Safety Data Sheet

REGULATION (EC) No. 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL (REACH) as amended. REGULATION (EC) No. 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL as amended. Data from the manufacturer of the substance / mixture, if available - information from registration dossiers.

### The changes (which information has been added, deleted or modified)

Adaptation of BL updated Annex II of the REACH Regulation as amended by Commission Regulation (EU) 2020/878.

### Statement

The safety data sheet contains the data needed to ensure safety and health at work and environmental protection. These data correspond to the current state of knowledge and experience and are in accordance with applicable legal regulations. They can not be considered as a guarantee of the suitability and usability of the product for a specific application. The user is responsible for the treatment under existing laws and regulations.