Safety Data Sheet

According to Annex II to REACH - Regulation 2015/830

SECTION 1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Code: **411 00 20000-6322**

Product name **ALUZINCO SPRAY**

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

Intended use **Anti-rust protective primer in aerosol**

1.3. Details of the supplier of the safety data sheet

Name **Meccanocar Italia S.r.l.**

Full address **Via San Francesco, 22**

District and Country **56033 Capannoli (PI)**
Italy

Tel. +39 0587 609433

Fax +39 0587 607145

e-mail address of the competent person

responsible for the Safety Data Sheet **moreno.meini@meccanocar.it**

1.4. Emergency telephone number

For urgent inquiries refer to **National Poisons Information Service: +44 121 507 4123**

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2015/830.
Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Aerosol, category 1	H222	Extremely flammable aerosol.
	H229	Pressurised container: may burst if heated.
Specific target organ toxicity - repeated exposure, category 2	H373	May cause damage to organs through prolonged or repeated exposure.
Eye irritation, category 2	H319	Causes serious eye irritation.
Skin irritation, category 2	H315	Causes skin irritation.
Specific target organ toxicity - single exposure, category 3	H335	May cause respiratory irritation.
Hazardous to the aquatic environment, chronic toxicity, category 3	H412	Harmful to aquatic life with long lasting effects.

2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:

Signal words: Danger

Hazard statements:

H222	Extremely flammable aerosol.
H229	Pressurised container: may burst if heated.
H373	May cause damage to organs through prolonged or repeated exposure.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
H412	Harmful 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.
P251	Do not pierce or burn, even after use.
P410+P412	Protect from sunlight. Do no expose to temperatures exceeding 50°C / 122°F.
P211	Do not spray on an open flame or other ignition source.
P273	Avoid release to the environment.
P391	Collect spillage.

Contains: ETHYLBENZENE AND XYLENE REACTION MASS

2.3. Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

SECTION 3. Composition/information on ingredients

3.2. Mixtures

Contains:

Identification	**x = Conc. %**	**Classification 1272/2008 (CLP)**
METHYL OXIDE DIMETHYLETER		
CAS 115-10-6	54 ≤ x < 58	Flam. Gas 1A H220, Press. Gas H280
EC 204-065-8		
INDEX -		
Reg. no. 01-2119472128-37-XXXX		
ETHYLBENZENE AND XYLENE REACTION MASS		
CAS -	35 ≤ x < 37,5	Flam. Liq. 3 H226, Acute Tox. 4 H312, Acute Tox. 4 H332, Skin Irrit. 2 H315, Aquatic Acute 1 H400 M=1

EC 905-588-0		
INDEX -		
Reg. no. 01-2119486136-34-XXXX		
ACETONE		
CAS 67-64-1	8 ≤ x < 9	Flam. Liq. 2 H225, Eye Irrit. 2 H319, STOT SE 3 H336, EUH066
EC 200-662-2		
INDEX 606-001-00-8		
Reg. no. 01-2119471330-49-XXXX		
ALUMINIUM POWDER (STABILIZED)		
CAS 7429-90-5	2 ≤ x < 2,5	Flam. Sol. 1 H228, Water-react. 2 H261, Classification note according to Annex VI to the CLP Regulation: T
EC 231-072-3		
INDEX 013-002-00-1		
Reg. no. 01-2119529243-45-XXXX		

The full wording of hazard (H) phrases is given in section 16 of the sheet.

The product is an aerosol containing propellants. For the purposes of calculation of the health hazards, propellants are not considered (unless they have health hazards). The percentages indicated are inclusive of the propellants.

Percentage of propellants: 54,00 %

SECTION 4. First aid measures

4.1. Description of first aid measures

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.
SKIN: Remove contaminated clothing. Wash immediately with plenty of water. If irritation persists, get medical advice/attention. Wash contaminated clothing before using it again.
INHALATION: Remove to open air. In the event of breathing difficulties, get medical advice/attention immediately.
INGESTION: Get medical advice/attention. Induce vomiting only if indicated by the doctor. Never give anything by mouth to an unconscious person, unless authorised by a doctor.

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

Specific information on symptoms and effects caused by the product are unknown.

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

Information not available

SECTION 5. Firefighting measures

5.1. Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT
The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.
UNSUITABLE EXTINGUISHING EQUIPMENT
None in particular.

5.2. Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE
If overheated, aerosol cans can deform, explode and be propelled considerable distances. Put a protective helmet on before approaching the fire. Do not breathe combustion products.

5.3. Advice for firefighters

GENERAL INFORMATION
Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear.
SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS
Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Eliminate all sources of ignition (cigarettes, flames, sparks, etc.) from the leakage site. Send away individuals who are not suitably equipped. Wear protective gloves / protective clothing / eye protection / face protection.

6.2. Environmental precautions

Do not disperse in the environment.

6.3. Methods and material for containment and cleaning up

Use inert absorbent material to soak up leaked product. Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Avoid bunching of electrostatic charges. Do not spray on flames or incandescent bodies. Vapours may catch fire and an explosion may occur; vapour accumulation is therefore to be avoided by leaving windows and doors open and ensuring good cross ventilation. Do not eat, drink or smoke during use. Do not breathe spray.

7.2. Conditions for safe storage, including any incompatibilities

Store in a place where adequate ventilation is ensured, away from direct sunlight at a temperature below 50°C / 122°F, away from any combustion sources.

7.3. Specific end use(s)

Information not available

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Regulatory References:

ESP	España	LÍMITES DE EXPOSICIÓN PROFESIONAL PARA AGENTES QUÍMICOS EN ESPAÑA 2019 (INSST)
FRA	France	Valeurs limites d'exposition professionnelle aux agents chimiques en France. ED 984 - INRS
GBR	United Kingdom	EH40/2005 Workplace exposure limits (Third edition,published 2018)
ITA	Italia	DIRETTIVA (UE) 2017/164 DELLA COMMISSIONE del 31 gennaio 2017
NOR	Norge	Fastsatt av Arbeids- og sosialdepartementet 21. august 2018 med hjemmel i lov 17. juni 2005 nr. 62 om arbeidsmiljø, arbeidstid, stillingsvern mv. (arbeidsmiljøloven) § 1-3, § 1-4 og § 4-5
PRT	Portugal	Ministério da Economia e do Emprego Consolida as prescrições mínimas em matéria de protecção dos trabalhadores contra os riscos para a segurança e a saúde devido à exposição a agentes químicos no trabalho - Diário da República, 1.ª série - N.º 111 - 11 de junho de 2018
EU	OEL EU	Directive (EU) 2017/2398; Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC; Directive 91/322/EEC.
	TLV-ACGIH	ACGIH 2019

METHYL OXIDE DIMETHYLETER

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
VLEP	ITA	983	400			INHAL

Predicted no-effect concentration - PNEC		
Normal value in fresh water	1,55	mg/l
Normal value in marine water	0,16	mg/l
Normal value for fresh water sediment	6,581	mg/kg
Normal value for marine water sediment	0,69	mg/kg
Normal value for water, intermittent release	1,549	mg/l
Normal value for the terrestrial compartment	0,45	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Inhalation				471 mg/m3		NPI		1894 mg/m3

ETHYLBENZENE AND XYLENE REACTION MASS

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,327	mg/l
Normal value in marine water	0,327	mg/l
Normal value for fresh water sediment	12,46	mg/kg
Normal value for marine water sediment	12,46	mg/kg
Normal value of STP microorganisms	6,58	mg/l
Normal value for the terrestrial compartment	2,31	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				12,5 mg/kg bw/d				
Inhalation	260 mg/m3	260 mg/m3	65,6 mg/m3	65,6 mg/m3	442 mg/m3	442 mg/m3	221 mg/m3	221 mg/m3
Skin				125 mg/kg bw/d				212 mg/kg bw/d

ACETONE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
VLEP	FRA	1210	500	2420	1000	
WEL	GBR	1210	500	3620	1500	
VLEP	ITA	1210	500			
TLV	NOR	295	125			
VLE	PRT	1210	500			
OEL	EU	1210	500			
TLV-ACGIH			250		500	

Predicted no-effect concentration - PNEC		
Normal value in fresh water	10,6	mg/l
Normal value in marine water	1,06	mg/l
Normal value for fresh water sediment	30,4	mg/kg
Normal value for marine water sediment	3,04	mg/kg
Normal value of STP microorganisms	100	mg/l
Normal value for the terrestrial compartment	29,5	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				62 mg/kg bw/d				
Inhalation				200 mg/m3			2420 mg/m3	1210 mg/m3
Skin				62 mg/kg bw/d				186 mg/kg bw/d

ALUMINIUM POWDER (STABILIZED)

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
VLA	ESP	10				
VLEP	FRA	5				
WEL	GBR	4				RESP
WEL	GBR	10				INHAL
TLV	NOR	2				
TLV-ACGIH		1	0,9			

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				7,9 mg/kg bw/d				
Inhalation							3,72 mg/m3	3,72 mg/m3

Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified.

8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.
When choosing personal protective equipment, ask your chemical substance supplier for advice.
Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

HAND PROTECTION
None required.

SKIN PROTECTION
Wear category II professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

EYE PROTECTION
Wear airtight protective goggles (see standard EN 166).

In the presence of risks of exposure to splashes or squirts during work, adequate mouth, nose and eye protection should be used to prevent accidental absorption.

RESPIRATORY PROTECTION
If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, a mask with a type AX filter combined with a type P filter should be worn (see standard EN 14387).
Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

ENVIRONMENTAL EXPOSURE CONTROLS

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

Product residues must not be indiscriminately disposed of with waste water or by dumping in waterways.

ACETONE

Protective gloves according to EN 374.
Glove material: Butyl rubber (butyl rubber) - Layer thickness> = 0.5 mm.
Breakthrough time:> 480 min.
Observe the glove manufacturer's instructions regarding penetrability and breakthrough time.

ALUMINIUM POWDER (STABILIZED)

Handle according to good industrial hygiene and safety practices. Wear suitable protective clothing and equipment.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	aerosol
Colour	silver
Odour	characteristic
Odour threshold	Not available
pH	Not available
Melting point / freezing point	Not available
Initial boiling point	Not available
Boiling range	Not available
Flash point	Not applicable
Evaporation rate	Not available
Flammability (solid, gas)	Not available
Lower inflammability limit	1 % (V/V)
Upper inflammability limit	26,2 % (V/V)
Lower explosive limit	Not available
Upper explosive limit	Not available
Vapour pressure	5200 hPa
Vapour density	Not available
Relative density	1,25
Solubility	partially miscible
Partition coefficient: n-octanol/water	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available
Explosive properties	Not available
Oxidising properties	Not available

9.2. Other information

Tenore del solvente:

Solventi organici:	95,8%
VOC(CE)	---
	643,5%
Contenuto solido:	9,1%

SECTION 10. Stability and reactivity

10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

ACETONE

Decomposes under the effect of heat.

Acetone reacts in the presence of bases. The vapor forms potentially explosive mixtures with the air. Heavier than air, they proceed at floor level and can flash at a great distance when turned on. It can electrostatically charge.

10.2. Chemical stability

The product is stable in normal conditions of use and storage.

10.3. Possibility of hazardous reactions

No hazardous reactions are foreseeable in normal conditions of use and storage.

METHYL OXIDE DIMETHYLETER

Vapors can form an explosive mixture with air.

ACETONE

Risk of explosion on contact with: bromine trifluoride,fluorine dioxide,hydrogen peroxide,nitrosyl chloride,2-methyl-1,3 butadiene,nitromethane,nitrosyl perchlorate.May react dangerously with: potassium tert-butoxide,alkaline hydroxides,bromine,bromoform,isoprene,sodium,sulphur dioxide,chromium trioxide,chromyl chloride,nitric acid,chloroform,peroxymonosulphuric acid,phosphoryl oxychloride,chromosulphuric acid,fluorine,strong oxidising agents,strong reducing agents.Develops flammable gas on contact with: nitrosyl perchlorate.

ZINC POWDER - ZINC DUST

Risk of explosion on contact with: ammonium nitrate,ammonium sulphide,barium peroxide,lead nitride,chlorates,chromium trioxide,sodium hydroxide,oxidising agents,performic acid,acids,tetrachloromethane,water.May react dangerously with: alkaline hydroxides,bromine pentafluoride,calcium chloride,fluorine,hexachloroethane,nitrobenzene,potassium dioxide,carbon disulphide,silver.Reacts with: strong acids,strong alkalis.May develop: hydrogen.

10.4. Conditions to avoid

Avoid overheating.

METHYL OXIDE DIMETHYLETER

Temperature:> 52 ° C

ACETONE

Avoid exposure to: sources of heat,naked flames.

Highly flammable. Concentrated vapors are heavier than air. Forms explosive mixtures with air, even in empty and uncleaned containers. It can produce, if mixed with chlorinated hydrocarbons and exposed to light, highly irritating chlorine acetone.

10.5. Incompatible materials

Strong reducing or oxidising agents, strong acids or alkalis, hot material.

METHYL OXIDE DIMETHYLETER

Oxygen, oxidizing agents, acid anhydrides, strong acids, carbon monoxide, acetic anhydride, powdered metals.

ACETONE

Incompatible with: acids,oxidising substances.

Attacks many plastics and rubbers. Condensation may form on contact with barium hydroxide, sodium hydroxide and many other alkaline materials. Avoid contact with strong oxidizing agents, alkalis and amines.

ZINC POWDER - ZINC DUST

Incompatible with: water,acids,strong alkalis.

10.6. Hazardous decomposition products

METHYL OXIDE DIMETHYLETER

Formaldehyde, carbon dioxide (CO2), carbon monoxide, methanol.

ACETONE

May develop: ketenes,irritant substances.

In case of fire the following can be released: carbon monoxide and carbon dioxide.

SECTION 11. Toxicological information

11.1. Information on toxicological effects

Metabolism, toxicokinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

Information not available

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

Information not available

Interactive effects

Information not available

ACUTE TOXICITY

LC50 (Inhalation) of the mixture:
14,46 mg/l
LD50 (Oral) of the mixture:
Not classified (no significant component)
LD50 (Dermal) of the mixture:
1445,71 mg/kg

METHYL OXIDE DIMETHYLETER

LC50 (Inhalation) 164000 ppm/4h rat

METHYL OXIDE DIMETHYLETER

Method: Not indicated
Reliability: 2
Species: Rat (albino ChR-CD; male)
Route of exposure: Inhalation (gas)
Results: LC50: 164 000 ppm

ETHYLBENZENE AND XYLENE REACTION MASS

Method: Equivalent or similar to EU Method B.2
Reliability: 1
Species: Rat (male)
Route of exposure: Inhalation (vapors)
Results: LC50 6 700 ppm

ACETONE

Method: Not indicated
Reliability: 2
Species: Rat (Sprague-Dawley)
Route of exposure: Oral
Results: LD50 = 5800 mg / kg bw
Bibliographic reference: Acetone potentiation of acute acetonitrile toxicity, Freeman JJ, Hayes EP (1985)

ZINC POWDER - ZINC DUST

Method: OECD 401
Reliability: 2
Species: Rat (Wistar; male; female)
Route of exposure: Oral
Results: LD50> 2 000 mg / kg bw
Method: OECD 403
Reliability: 2
Species: Rat (Wistar; male; female)
Route of exposure: Inhalation (dust)
Results: LC50> 5 410 mg / m^3 air

SKIN CORROSION / IRRITATION

Causes skin irritation

ZINC POWDER - ZINC DUST

Method: Not indicated-Read Across
Reliability: 2
Species: Rabbit (New Zealand White)
Route of exposure: Dermal
Results: Not irritating

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye irritation

ZINC POWDER - ZINC DUST

Method: EU Method B.5
Reliability: 2
Species: Rabbit (New Zealand White)
Route of exposure: Ocular
Results: Not irritating

RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class

ACETONE

Method: Not indicated
Reliability: 2
Species: guinea pig (Hartley; female)
Route of exposure: Dermal
Results: Not sensitizing
Bibliographic reference: A new protocol and criteria for quantitative determination of sensitization potencies of chemicals by guinea pig maximization test, Nakamura A, Momma J, Sekiguchi H, Noda T, Yamano T, Kaniwa MA, Kojima S, Tsuda M, Kurokawa Y (1994)

Skin sensitization
ZINC POWDER - ZINC DUST

Method: OECD 406-Read Across
Reliability: 1
Species: guinea pig (Dunkin-Hartley; female)
Route of exposure: Dermal
Results: Not sensitizing

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

METHYL OXIDE DIMETHYLETER

Method: OECD 471 in vitro test
Reliability: 1
Species: S. typhimurium
Results: Negative
Method: Equivalent or similar to OECD 477 in vivo test
Reliability: 2
Species: Drosophila melanogaster (male)
Route of exposure: Inhalation (gas)
Results: Negative

ETHYLBENZENE AND XYLENE REACTION MASS

Method: Equivalent or similar OECD Guideline 478-test in vivo
Reliability: 2
Species: Mouse (Swiss Webster; male / female)
Route of exposure: Subcutaneous
Results: Negative

ZINC POWDER - ZINC DUST

Method: Not indicated - in vitro test

Reliability: 2
Species: Lymphoma mouse
Results: Negative
Bibliographic reference: Amacher DE & Paillet SC, Induction of trifluorothymidine-resistant mutants by metal ions in L5178y / TK +/- cells (1980)
Method: Not indicated - in vivo test
Reliability: 2
Species: Mouse (NMRI; male / female)
Route of exposure: Introperitoneal
Results: Negative
Bibliographic reference: Gocke E, King M-T, Eckhardt K & Wild D, Mutagenicity of Cosmetics Ingredients Licensed by the European Communities (1981)

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

METHYL OXIDE DIMETHYLETER

Method: Equivalent or similar to OECD 453
Reliability: 1
Species: Rat (CD (R) (SD) BR; male / female)
Route of exposure: Inhalation (vapors)
Results: Negative

ETHYLBENZENE AND XYLENE REACTION MASS

Method: Equivalent or similar to EU Method B.32
Reliability: 2
Species: Rat (F344 / N; male / female)
Route of exposure: Oral
Results: Negative

ACETONE

Method: Not indicated
Reliability: 2
Species: Mouse (ICR; female)
Route of exposure: Dermal
Results: Negative
Bibliographic reference: Mouse skin carcinogenicity tests of the flame retardants tris (2,3-dibromopropyl) phosphate, tetrakis (hydroxymethyl) phosphonium chloride, and polyvinyl bromide, Van Duuren BL, Loewengart G, Seldman I, Smith AC, Melchionne S (1974)

ZINC POWDER - ZINC DUST

Method: Not indicated
Reliability: 2
Species: Mouse (Chester Beatty stock; male / female)
Route of exposure: Oral
Results: NOAEL> 22 000 mg / L
Bibliographic reference: Walters M & Roe FJC, A Study of the Effects of Zinc and Tin Administered Orally to Mice Over a Prolonged Period (1965)

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

METHYL OXIDE DIMETHYLETER

Method: Equivalent or similar to OECD 452
Reliability: 1
Species: Rat (CD (SD) BR; male / female)
Route of exposure: Inhalation (vapors)

Results: Negative

Adverse effects on sexual function and fertility
ZINC POWDER - ZINC DUST

Method: Not indicated
Reliability: 2
Species: Rat (Charles-Foster; male / female)
Route of exposure: Oral
Results: Zinc dietary supplementation at 4,000 ppm reduced male fertility in rats under the conditions of the study.

Adverse effects on development of the offspring
ETHYLBENZENE AND XYLENE REACTION MASS

Method: Equivalent or similar OECD Guideline 414
Reliability: 2
Species: Rat (Sprague-Dawley)
Route of exposure: Inhalation (vapors)
Results: NOAEC 500 ppm

ACETONE

Method: Equivalent or similar to OECD 414
Reliability: 1
Species: Rat (Sprague-Dawley)
Route of exposure: Inhalation (vapors)
Results: Negative, NOAEC (development) = 2200 ppm

ZINC POWDER - ZINC DUST

Method: Not indicated
Reliability: 2
Species: Hamster
Route of exposure: Oral
Results: NOAEL (development) 88 mg / kg bw / day

STOT - SINGLE EXPOSURE

May cause respiratory irritation

METHYL OXIDE DIMETHYLETER

Based on available data and through expert judgment, the substance is not classified in the target organ toxicity class for single exposure.

ETHYLBENZENE AND XYLENE REACTION MASS

Based on available data and through expert judgment, the substance is not classified in the target organ toxicity class for single exposure.

ACETONE

Based on available data and through expert judgment, the substance is classified in the target organ toxicity class for single exposure.

ALUMINIUM POWDER (STABILIZED)

Based on available data and through expert judgment, the substance is not classified in the target organ toxicity class for single exposure.

ZINC POWDER - ZINC DUST

Based on available data and through expert judgment, the substance is not classified in the target organ toxicity class for single exposure.

Target organ
ACETONE

Narcotic effects

Route of exposure
ACETONE

Inhalation

STOT - REPEATED EXPOSURE

May cause damage to organs

METHYL OXIDE DIMETHYLETER

Method: Equivalent or similar to OECD 452
Reliability: 1
Species: Rat (Crl: CD (R) (SD) BR; male / female)
Route of exposure: Inhalation (vapors)
Results: Positive, NOAEL = 2.5%

ETHYLBENZENE AND XYLENE REACTION MASS

Method: Equivalent or similar to EU Method B.32
Reliability: 2
Species: Rat (F344 / N; male / female)
Route of exposure: Oral
Results: NOAEL 250 mg / kg bw / day

ACETONE

Method: Equivalent or similar to OECD 408
Reliability: 1
Species: Rat (Fischer 344; male / female)
Route of exposure: Oral
Results: Negative, NOAEL = 10000 ppm
Method: Not indicated
Reliability: 2
Species: Rat (Sprague-Dawley; male)
Route of exposure: Inhalation
Results: Negative, NOAEC = 19000 ppm
Bibliographic reference: Evaluation of toluene and acetone inhalant abuse. II. Model development and toxicology, Bruckner JV, Peterson RG (1981)
Method: Not indicated
Reliability: 2
Species: Not indicated
Route of exposure: Dermal
Results: Negative
Bibliographic reference: Pathology of aging female SENCAR mice used as controls in skin two-stage carcinogenesis studies, Ward J, Quander RD, Wenk M, Spangler E (1986)

ALUMINIUM POWDER (STABILIZED)

Based on available data and through expert judgment, the substance is not classified in the target organ toxicity class for prolonged or repeated exposure.

ZINC POWDER - ZINC DUST

Method: OECD 408
Reliability: 2
Species: Rat (Sprague-Dawley; male / female)
Route of exposure: Oral
Results: NOAEL 31.52 mg / kg bw
Method: Not indicated-Read Across
Reliability: 2
Species: guinea pig (Hartley; male)
Route of exposure: Inhalation
Results: Negative
Bibliographic reference: Lam HF, Chen LC, Ainsworth D, Peoples S and Amdur MO,
Pulmonary function of guinea pigs exposed to freshly generated ultrafine zinc oxide with and without spike concentrations (1988)

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

SECTION 12. Ecological information

This product is dangerous for the environment and the aquatic organisms. In the long term, it have negative effects on aquatic environment.

12.1. Toxicity

ZINC POWDER - ZINC DUST	
LC50 - for Fish	7,1 mg/l/96h Nothobranchius guentheri
EC50 - for Crustacea	2,8 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	0,015 mg/l/72h Pseudokirchneriella subcapitata

METHYL OXIDE DIMETHYLETER	
LC50 - for Fish	4100 mg/l/96h
EC50 - for Crustacea	4400 mg/l/48h
EC50 - for Algae / Aquatic Plants	154,917 mg/l/72h
Chronic NOEC for Fish	4100 mg/l
Chronic NOEC for Crustacea	4400 mg/l

ETHYLBENZENE AND XYLENE REACTION MASS	
LC50 - for Fish	2,6 mg/l/96h
EC50 - for Crustacea	1 mg/l/48h
EC50 - for Algae / Aquatic Plants	1,3 mg/l/72h
EC10 for Algae / Aquatic Plants	0,44 mg/l/72h
Chronic NOEC for Algae / Aquatic Plants	0,44 mg/l

12.2. Persistence and degradability

ACETONE
Easily degradable in water, 90.9% in 28 days.

ACETONE

Rapidly degradable

ALUMINIUM POWDER (STABILIZED)

Solubility in water	0 mg/l

Degradability: information not available

ZINC POWDER - ZINC DUST

Solubility in water	0,1 - 100 mg/l

Degradability: information not available

METHYL OXIDE DIMETHYLETER

Solubility in water	45600 mg/l

12.3. Bioaccumulative potential

ACETONE

Partition coefficient: n-octanol/water	-0,23
BCF	3

METHYL OXIDE DIMETHYLETER

Partition coefficient: n-octanol/water	0,07 Log Kow

12.4. Mobility in soil

Information not available

12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

12.6. Other adverse effects

Information not available

SECTION 13. Disposal considerations

13.1. Waste treatment methods

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.
Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.
Waste transportation may be subject to ADR restrictions.
CONTAMINATED PACKAGING
Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

METHYL OXIDE DIMETHYLETER
It can be used after reconditioning. In accordance with local and national regulations. It must be incinerated in a suitable incineration plant in possession of an authorization issued by the competent authorities.

ACETONE
Incinerate as hazardous waste according to applicable local, state and federal regulations. Do not throw in household waste.

SECTION 14. Transport information

14.1. UN number

ADR / RID, IMDG, IATA:	1950

14.2. UN proper shipping name

ADR / RID:	AEROSOLS
IMDG:	AEROSOLS
IATA:	AEROSOLS, FLAMMABLE

14.3. Transport hazard class(es)

ADR / RID:	Class: 2	Label: 2.1
IMDG:	Class: 2	Label: 2.1
IATA:	Class: 2	Label: 2.1

14.4. Packing group

ADR / RID, IMDG, IATA:	-

14.5. Environmental hazards

ADR / RID:	Environmentally Hazardous
IMDG:	Marine Pollutant
IATA:	NO

For Air transport, environmentally hazardous mark is only mandatory for UN 3077 and UN 3082.

14.6. Special precautions for user

ADR / RID:	HIN - Kemler: -- Special Provision: -	Limited Quantities: 1 L	Tunnel restriction code: (D)
IMDG:	EMS: F-D, S-U	Limited Quantities: 1 L	
IATA:	Cargo:	Maximum	Packaging

Pass.:	quantity: 150 Kg Maximum quantity: 75 Kg	instructions: 203 Packaging instructions: 203
Special Instructions:	A145, A167, A802	

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Information not relevant

SECTION 15. Regulatory information

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

Seveso Category - Directive 2012/18/EC: P3a

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

Product
Point 40

Substances in Candidate List (Art. 59 REACH)

On the basis of available data, the product does not contain any SVHC in percentage greater than 0,1%.

Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Healthcare controls

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

15.2. Chemical safety assessment

A chemical safety assessment has not been performed for the preparation/for the substances indicated in section 3.

SECTION 16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

Flam. Gas 1A	Flammable gas, category 1A
Aerosol 1	Aerosol, category 1
Aerosol 3	Aerosol, category 3
Flam. Liq. 2	Flammable liquid, category 2
Flam. Liq. 3	Flammable liquid, category 3
Flam. Sol. 1	Flammable solid, category 1
Water-react. 2	Substance or mixture which in contact with water emits flammable gas, category 2
Press. Gas	Pressurised gas
Acute Tox. 4	Acute toxicity, category 4
STOT RE 2	Specific target organ toxicity - repeated exposure, category 2
Eye Irrit. 2	Eye irritation, category 2
Skin Irrit. 2	Skin irritation, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3
Aquatic Acute 1	Hazardous to the aquatic environment, acute toxicity, category 1
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic toxicity, category 3
H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H229	Pressurised container: may burst if heated.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H228	Flammable solid.
H261	In contact with water releases flammable gases.
H280	Contains gas under pressure; may burst if heated.
H312	Harmful in contact with skin.
H332	Harmful if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H412	Harmful to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

LEGEND:
- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%

- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY

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2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
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4. Regulation (EU) 2015/830 of the European Parliament
5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
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9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
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11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
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14. Regulation (EU) 2018/669 (XI Atp. CLP)
15. Regulation (EU) 2018/1480 (XIII Atp. CLP)
16. Regulation (EU) 2019/521 (XII Atp. CLP)
- The Merck Index. - 10th Edition
- Handling Chemical Safety
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- IFA GESTIS website
- ECHA website
- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

Note for users:
The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.
This document must not be regarded as a guarantee on any specific product property.
The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.
Provide appointed staff with adequate training on how to use chemical products.
Product`s classification is based on the calculation methods set out in Annex I of the CLP Regulation, unless otherwise indicated in sections 11 and 12.
The data for evaluation of chemical-physical properties are reported in section 9.

Changes to previous review:
The following sections were modified:
02 / 03 / 04 / 08 / 09 / 10 / 11 / 12 / 13 / 15 / 16.