

## ZAMA

# Information Sheet

*This Information Sheet must not be considered a safety data sheet for the purposes of art. 31 of EU REACH.*

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

### 1.1. Product identifier

Product name **ZAMA**

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

Intended use Alloy ingots for industrial applications and production.  
Uses advised against Uses other than those stated.

### 1.3. Details of the supplier of the Information sheet

Name Itai-Leghe S.r.l.  
Full address Via G. Galilei, 15 ,17, 21  
District and Country 22070, Guanzate (CO) - ITALIA  
tel. 031977487

e-mail address of the competent person responsible for the Information Sheet info@italleghe.eu

### 1.4. Emergency telephone number

For urgent inquiries refer to **Itai-Leghe S.r.l.** Company emergency telephone number: 031977487- technical support (08:00/12:30 – 14:00/17:30)

## SECTION 2. Hazards identification

### 2.1. Classification of the substance or mixture

The product is not classified as hazardous pursuant to the provisions set forth in EC Regulation 1272/2008 (CLP) (and subsequent amendments and supplements).

Hazard classification and indication: --

### 2.2. Label elements

Hazard pictograms: --  
Signal words: --  
Hazard statements: --  
Precautionary statements: --

### 2.3. Other hazards

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

The product does not contain substances with endocrine disrupting properties in concentration  $\geq$  0.1%.

This product is supplied in bulk form; however, hazardous fumes may form during processing.

Subsequent mechanical processes can bring it back to its original powdered form with related health hazards for the operators.

Zinc or zinc oxide fumes may develop during high-temperature processes. Prolonged inhalation of such fumes may cause metal fume fever with flu-like symptoms.

Zinc fumes may cause localised eye irritation (above 90°C). Ingesting zinc powder may cause gastrointestinal disorders.

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### SECTION 3. Composition/information on ingredients

#### 3.2. Mixtures

Contains:

Identification	Conc. %	Classification (EC) 1272/2008 (CLP)
<b>ZINC (MASSIVE FORM)</b>		
INDEX -	$95 \leq x < 100$	not classified
EC 231-175-3		
CAS 7440-66-6		
REACH Reg. 01-2119467174-37-0000		
<b>ALUMINIUM (MASSIVE FORM)</b>		
INDEX 013-002-00-1	$1 \leq x < 5$	not classified
EC 231-072-3		
CAS 7429-90-5		
REACH Reg. 01-2119529243-45-0000		
<b>COPPER (MASSIVE FORM)</b>		
INDEX -	$0,3 \leq x \leq 0,5$	not classified
EC 231-159-6		
CAS 7440-50-8		
REACH Reg. 01-2119480154-42-0000		
<b>MAGNESIUM (MASSIVE FORM)</b>		
INDEX -	$0,001 \leq x < 0,1$	not classified
EC 231-104-6		
CAS 7439-95-4		
REACH Reg. 01-2119537203-49-0000		

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

### 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.

**PROTECTIVE MEASURES FOR THE FIRST RESCUE WORKERS:** for PPE (personal protection equipment) required for first aid refer to section 8.2 of this safety data sheet.

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

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In case of dust formation:

**Acute effects:**

Inhalation: Inhalation may cause chills, fever, sweating, and nausea. Other effects may include throat and nose irritation, metallic taste in the mouth, breathing difficulty, shortness of breath and chest pain.

Eyes: May cause eye irritation and/or conjunctivitis.

Skin: May cause skin irritation and dermatitis, especially in skin folds, due to dust build-up and friction. Some individuals may become sensitised after repeated contact with the dust.

**Chronic effects:**

Long-term effects of repeated exposure may include respiratory diseases.

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

Treat symptomatically.

In case of accident or if you feel unwell, seek medical advice immediately (show directions for use or information sheet if possible).

## SECTION 5. Firefighting measures

### 5.1. Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT

Powder extinguishers (suitable for class 'D' fire), sand.

UNSUITABLE EXTINGUISHING EQUIPMENT

Do not use water, foam or halogenated extinguishing agents to fight the fire.

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

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

The product is non-flammable in bulk form.

Avoid breathing combustion products and metal oxides (if any).

Moisture entrapped in molten metal may cause explosions.

### 5.3. Advice for firefighters

GENERAL INFORMATION

The product is non-reactive, non-flammable, and non-explosive in bulk form; therefore, it is non-hazardous.

Always wear full fire prevention gear.

Collect extinguishing water. Do not drain it into the sewer system. Dispose of contaminated fire extinguishing water and fire residues in compliance with the standards in force.

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

#### 6.1.1 For non-emergency personnel

Do not inhale dust. Do not inhale molten product fumes. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Wear appropriate respirator when ventilation is inadequate.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the information sheet) to prevent any contamination of skin, eyes and personal clothing. Do not breathe fumes. Avoid leakage of the product into the environment.

Non-emergency personnel must follow the appropriate internal procedures in case of accidental release.

#### 6.1.2 For emergency responders

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Block the leakage if there is no hazard. Evacuate unprotected and untrained personnel from hazard area. Wear suitable protective equipment. (see Section 8 of this information sheet)

Follow the appropriate internal procedures in case of accidental release.

Keep fumes and vapours under control. Isolate hazard area and deny entry. Ventilate closed spaces before entering. Send away individuals who are not suitably equipped. Eliminate all sources of ignition (cigarettes, flames, sparks, etc.) from the leakage site.

### 6.2. Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

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

**MOLTEN MATERIAL** Use non-sparking mechanical tools to collect the product in case of accidental release and place it in suitable containers for recovery or disposal. Use dry sand, soil, or ash to contain the flow. Do not use water jets to eliminate residues. All tools (e.g. shovels and handheld tools) and containers that come into contact with molten metal must be pre-heated or specially coated and approved for such use. Allow the spill to cool before remelting as scrap. Allow the molten metal to solidify before handling it. Once cool, place the product in suitable containers for recovery or disposal.

Ventilate the area where the leak occurred. See section 7 for incompatible container materials (if any). The contaminated material must be disposed of in compliance with the provisions in section 13.

**POWDER** Collect the product in case of accidental release and place it in suitable containers for recovery or disposal using methods that minimise the creation of airborne dust. Use explosion-proof equipment.

Do not allow dust deposits to accumulate on surfaces, as these may form an explosive mixture if released into the atmosphere in sufficient concentrations. Do not breathe dust. Avoid dispersion of dust into the air (i.e., cleaning surfaces with compressed air). Clean the spillage area with a damp cloth.

Confine using earth or inert material. Collect as much material as possible and eliminate the rest using jets of water. 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 dust formation. Do not breathe the vapours and gases released from molten metal. Do not touch molten metal.

Read all the other sections of this safety data sheet before handling this product. Prevent product release into the environment. Do not eat, drink or smoke while using this product. Remove contaminated clothing and protective equipment before entering the eating areas. Keep the material dry if used at high temperatures in contact with molten metal.

Never add wet materials to the molten bath. We recommend providing regular training on the hazards of adding wet metal or oil-contaminated material to the furnace for all the personnel involved (including the cleaning personnel).

Correct system and equipment design and good cleaning practices can significantly reduce the risk of fire and explosions. Minimise exposure by following appropriate work procedures and ensuring adequate ventilation in the workplace. Follow the internal safe handling procedures.

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

Must be stored in a cool, well-ventilated place protected from weather agents and humidity and away from ignition sources, protected from knocks, and in the absence of flammable and/or reducing materials.

Avoid any obstacles and encumbrance, as well as uneven or slippery flooring.

Systems must be arranged in a way to allow all operators to reach the emergency escape routes easily.

Keep away from incompatible materials (see section 10).

Follow the internal safe storage procedures.

### 7.3. Specific end use(s)

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No use other than as indicated in section 1.2 of this information sheet.

### SECTION 8. Exposure controls/personal protection

#### 8.1. Control parameters

Regulatory references:

BEL	Belgique	Liste de valeurs limites d'exposition aux agents chimiques, livre VI du code du bien-être au travail
BGR	България	НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г. ЗА ЗАЩИТА НА РАБОТЕЩИТЕ ОТ РИСКОВЕ, СВЪРЗАНИ С ЕКСПОЗИЦИЯ НА ХИМИЧНИ АГЕНТИ ПРИ РАБОТА (изм. ДВ. бр.5 от 17 Януари 2020г.)
CHE	Suisse / Schweiz	Valeurs limites d'exposition aux postes de travail: VME/VLE (SUVA). Grenzwerte am Arbeitsplatz: MAK (SUVA)
CZE	Česká Republika	Nařízení vlády č. 41/2020 Sb. Nařízení vlády, kterým se mění nařízení vlády č. 361/2007 Sb., kterým se stanoví podmínky ochrany zdraví při práci, ve znění pozdějších předpisů
DEU	Deutschland	Technischen Regeln für Gefahrstoffe (TRGS 900) - Liste der Arbeitsplatzgrenzwerte und Kurzzeitwerte. MAK- und BAT-Werte-Liste 2020, Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe, Mitteilung 56
DNK	Danmark	Bekendtgørelse om grænseværdier for stoffer og materialer - BEK nr 1458 af 13/12/2019
ESP	España	Límites de exposición profesional para agentes químicos en España 2021
EST	Eesti	Ohtlike kemikaalide ja neid sisaldavate materjalide kasutamise töötervishoiu ja tööohutuse nõuded ning töökeskkonna keemiliste ohutegurite piirnormid [RT I, 17.10.2019, 1 - jõust. 17.01.2020]
FRA	France	Valeurs limites d'exposition professionnelle aux agents chimiques en France. ED 984 - INRS
GRC	Ελλάδα	Π.Δ. 26/2020 (ΦΕΚ 50/Α' 6.3.2020) Εναρμόνιση της ελληνικής νομοθεσίας προς τις διατάξεις των οδηγιών 2017/2398/ΕΕ, 2019/130/ΕΕ και 2019/983/ΕΕ «για την τροποποίηση της οδηγίας 2004/37/ΕΚ σχετικά με την προστασία των εργαζομένων από τους κινδύνους που συνδέονται με την έκθεση σε καρκινογόνους ή μεταλλαξιογόνους παράγοντες κατά την εργασία» Az innovációért és technológiáért felelős miniszter 5/2020. (II. 6.) ITM rendelete a kémiai körökí tényezők hatástanak kitett munkavállalók egészségének és biztonságának védelméről
HUN	Magyarország	2020 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations (2001-2015) and the Safety, Health and Welfare at Work (Carcinogens) Regulations (2001-2019)
IRL	Éire	Jsakymas dėl lietuvis higienos normos hn 23:2011 „cheminių medžiagų profesinio poveikio ribiniai dydžiai. Matavimo ir poveikio vertinimo bendrieji reikalavimai“ patvirtinimo
LTU	Lietuva	Grozījumi Ministru kabineta 2007. gada 15. maija noteikumos Nr. 325 "Darba aizsardzības prasības saskaņā ar ķīmiskajām vielām darba vietās" (prot. Nr. 32 18. §; prot. Nr. 1 22. §)
LVA	Latvija	Forskrift om endring i forskrift om tiltaksverdi og grenseverdi for fysiske og kjemiske faktorer i arbeidsmiljøet samt smitterisikogrupper for biologiske faktorer (forskrift om tiltaks- og grenseverdi), 21. august 2018 nr. 1255
NOR	Norge	Rozporządzenie ministra rozwoju, pracy i technologii z dnia 18 lutego 2021 r. Zmieniające rozporządzenie w sprawie najwyższych dopuszczalnych stężeń i natężeń czynników szkodliwych dla zdrowia w środowisku pracy
POL	Polska	Hygieniska gränsvärden, Arbetsmiljöverkets föreskrifter och allmänna råd om hygieniska gränsvärden (AFS 2018:1)
SWE	Sverige	NARIADENIE VLÁDY Slovenskej republiky z 12. augusta 2020, ktorým sa mení a dopĺňa nariadenie vlády Slovenskej republiky č. 356/2006 Z. z. o ochrane zdravia zamestnancov pred rizikami súvisiacimi s expozíciou karcinogénnym a mutagénym faktorom pri práci v znení neskorších predpisov
SVK	Slovensko	EH40/2005 Workplace exposure limits (Fourth Edition 2020)
GBR	United Kingdom TLV-ACGIH	ACGIH 2023

#### MAGNESIUM (MASSIVE FORM)

##### Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV-ACGIH		10				INHAL magnesium oxide

#### ALUMINIUM (MASSIVE FORM)

##### Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
VLEP	BEL	1				
TLV	BGR	2				RESP

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MAK	CHE	3	RESP
TLV	CZE	10	
MAK	DEU	2	
MAK	DEU	4	INHAL
MAK	DEU		RESP
TLV	DNK	5	
VLA	ESP	10	
TLV	EST	4	
VLEP	FRA	5	
TLV	GRC	10	
AK	HUN	6	
OELV	IRL	1	RESP
RD	LTU	5	
RV	LVA	2	
TLV	NOR	2	
NDS/NDSch	POL	1	RESP
NGV/KGV	SWE	2	RESP
NPEL	SVK	4	INHAL
NPEL	SVK	2	RESP
WEL	GBR	4	
TLV-ACGIH		1	RESP

### COPPER (MASSIVE FORM)

#### Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV-ACGIH		0,2				Copper, fumes

### ZINC (MASSIVE FORM)

#### Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV-ACGIH		2		10		RESP Zinc oxide

During the risk assessment process, it is essential to take into consideration the ACGIH occupational exposure levels for inert particulate not otherwise classified (PNOC respirable fraction: 3 mg/m<sup>3</sup>; PNOC inhalable fraction: 10 mg/m<sup>3</sup>). For values above these limits, use a P type filter, whose class (1, 2 or 3) must be chosen according to the outcome of risk assessment.

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 ; LOW = low hazard ; MED = medium hazard ; HIGH = high hazard.

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### Recommended monitoring procedures:

Reference should be made to monitoring standards, such as the following:

European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy)

European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

### 8.2. Exposure controls

General industrial hygiene practice involves measures to prevent contamination (e.g., showering and changing clothes at the end of a shift, cleaning regularly using adequate devices, and no eating or smoking at the workplace). Avoid inhalation and ingestion. Wear certified workwear and footwear unless otherwise stated. Contaminated work clothes must not be allowed out of the workplace. Ensure good ventilation in the workplace.

Adequate ventilation is required. Do not use compressed air to remove dust generated during processing. Regular training on occupational hygiene practices and proper use of PPE is required.

Since the use of appropriate technical measures should always take priority over personal protective equipment, ensure good ventilation in the workplace through effective local exhaust ventilation.

Personal protective equipment should bear the CE marking attesting to its conformity with current standards.

Provide an emergency shower with visocular tray.

Exposure levels should be kept as low as possible to avoid significant accumulation in the body. Personal protective equipment should be managed in such a way as to ensure maximum protection (e.g. reduced replacement times).

#### HAND PROTECTION

Protect hands with category III work gloves.

The following should be considered when choosing work glove material (see standard EN 374): compatibility, degradation, failure time and permeability.

The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

#### SKIN PROTECTION

Wear category III 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).

#### RESPIRATORY PROTECTION

Not necessary, unless otherwise specified in the chemical risk assessment.

For dust exposure (during the process), wear a type FFP3 facemask, (see standard EN 149).

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.

## SECTION 9. Physical and chemical properties

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

Properties	Value
Appearance	Solid – massive form
Colour	Gray.
Odour	Odourless
Melting point / freezing point	380 °C
Initial boiling point	not applicable based on physical state

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Flammability	The product does not meet the flammability criteria (ref. CLP Reg.)
Lower explosive limit	not applicable based on physical state
Upper explosive limit	not applicable based on physical state
Flash point	not applicable based on physical state
Auto-ignition temperature	not available
Decomposition temperature	not available
pH	Not applicable as it is insoluble in water.
Kinematic viscosity	not applicable based on physical state
Solubility	insoluble in water
Partition coefficient: n-octanol/water	Not available - inorganic substance
Vapour pressure	not applicable based on physical state
Density and/or relative density	6,6-6,8 g/cm <sup>3</sup>
Relative vapour density	not applicable based on physical state
Particle characteristics	not applicable based on physical state

### 9.2. Other information

9.2.1. Information with regard to physical hazard classes  
Information not available

9.2.2. Other safety characteristics  
Information not available

## SECTION 10. Stability and reactivity

### 10.1. Reactivity

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

### 10.2. Chemical stability

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

### 10.3. Possibility of hazardous reactions

No particular hazardous reactions are known.

### 10.4. Conditions to avoid

Do not expose the product to moisture.  
Strong oxidising agents must be excluded during heating and melting operations to prevent explosion risks.

### 10.5. Incompatible materials

Water, oxidising agents, strong acids, bases.

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### 10.6. Hazardous decomposition products

Molten metal can release metal oxides.

## SECTION 11. Toxicological information

According to currently available data, this product has not yet produced health damages. Anyway, it must be handled according to good industrial practices.

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

Pure zinc powder is not harmful; however, inhaling oxide fumes generated by oxidation is hazardous. These fumes can cause a sweet taste in the mouth, dryness of the throat, fatigue, pain, fever, shivers, nausea, and vomiting.

#### ACUTE TOXICITY

ATE (Inhalation) of the mixture:	>5 mg/l
ATE (Oral) of the mixture:	>2000 mg/kg
ATE (Dermal) of the mixture:	>2000 mg/kg

#### SKIN CORROSION / IRRITATION

Does not meet the classification criteria for this hazard class

#### SERIOUS EYE DAMAGE / IRRITATION

Does not meet the classification criteria for this hazard class

#### RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class

#### GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

#### CARCINOGENICITY

Does not meet the classification criteria for this hazard class

#### REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

#### STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

#### STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

#### ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

### 11.2. Information on other hazards

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with human health effects under evaluation.

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### SECTION 12. Ecological information

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation.

#### 12.1. Toxicity

No product data available.

##### ZINC (BULK FORM)

Algae IC50 (72h): 4\*-19 mg/l

Daphnia Magna: EC50 (48h): 10\*-31 mg/l

Fish: LC50 (96h): > 100 mg/l

\*limit case: saturation assumption instead of relative solubility

##### ALUMINIUM (BULK FORM)

LC50 - Fish.

> 100 mg/l/96h Salmo trutta (OECD Guideline 203 (Fish, Acute Toxicity test))

EC50 - Crustaceans.

> 100 mg/l/48h Daphnia magna (OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test))

EC50 - Algae/Aquatic Plants.

> 100 mg/l/72h Selenastrum capricornutum (OECD Guideline 201 (Algae, Growth Inhibition Test))

#### 12.2. Persistence and degradability

Persistence/ biodegradability: Not relevant for metals.

#### 12.3. Bioaccumulative potential

Information not available

#### 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  $\geq$  than 0,1%.

#### 12.6. Endocrine disrupting properties

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with environmental effects under evaluation.

#### 12.7. Other adverse effects

Information not available

### SECTION 13. Disposal considerations

#### 13.1. Waste treatment methods

The hazard level of waste containing this product should be evaluated according to applicable regulations. (Directive 2008/98/EC and subsequent

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amendments and adjustments and related national transpositions).

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

The legal responsibility for disposal is the producer / holder of the waste.

To this mixture different CER codes could be applied (European Waste Code) based on the specific circumstances that generated the waste, possible alterations and / or possible contamination. The suitable final destination of the waste must be evaluated by the manufacturer on the basis of the chemical-physical characteristics of the waste, the compatibility with the authorized facility to which it will be given for recovery, and the definitive treatment or disposal according to the procedures established by current regulations

**SECTION 14. Transport information**

The product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations.

**14.1. UN number or ID number**

not applicable

**14.2. UN proper shipping name**

not applicable

**14.3. Transport hazard class(es)**

not applicable

**14.4. Packing group**

not applicable

**14.5. Environmental hazards**

not applicable

**14.6. Special precautions for user**

not applicable

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

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/EU

None

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

None

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors

not applicable

Substances in Candidate List (Art. 59 REACH)

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

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### Substances subject to authorisation (Annex XIV REACH)

None

### Substances subject to exportation reporting pursuant to Regulation (EU) 649/2012:

None

### Substances subject to the Rotterdam Convention:

None

### Substances subject to the Stockholm Convention:

None

### Healthcare controls

Information not available

### 15.2. Chemical safety assessment

A chemical safety assessment has not been performed.

## SECTION 16. Other information

### LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE: Identifier in ESIS (European archive of existing substances)
- CLP: Regulation (EC) 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: 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: Regulation (EC) 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: Time-weighted average exposure limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

### GENERAL BIBLIOGRAPHY

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
2. Regulation (EC) 1272/2008 (CLP) of the European Parliament

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3. Regulation (EU) 2020/878 (II Annex of REACH Regulation)
  4. Regulation (EC) 790/2009 (I Atp. CLP) 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
  7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
  8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
  9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
  10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
  11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
  12. Regulation (EU) 2016/1179 (IX Atp. CLP)
  13. Regulation (EU) 2017/776 (X Atp. CLP)
  14. Regulation (EU) 2018/669 (XI Atp. CLP)
  15. Regulation (EU) 2019/521 (XII Atp. CLP)
  16. Delegated Regulation (UE) 2018/1480 (XIII Atp. CLP)
  17. Regulation (EU) 2019/1148
  18. Delegated Regulation (UE) 2020/217 (XIV Atp. CLP)
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  20. Delegated Regulation (UE) 2021/643 (XVI Atp. CLP)
  21. Delegated Regulation (UE) 2021/849 (XVII Atp. CLP)
  22. Delegated Regulation (UE) 2022/692 (XVIII 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.

### CALCULATION METHODS FOR CLASSIFICATION

Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.

Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.

Environmental hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.

### Changes to previous review:

The following sections were modified:

01 / 02 / 03 / 04 / 05 / 06 / 07 / 08 / 09 / 10 / 11 / 12 / 13 / 14 / 15 / 16

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