

Revision nr. 1

Dated 28/10/2019

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# 4008/STANSALT - STANOMERSE IMMERSION TIN CRYSTALS

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## **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: 4008/STANSALT

Product name STANOMERSE IMMERSION TIN CRYSTALS

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

Intended use Tin plating. Restricted to professional users.

1.3. Details of the supplier of the safety data sheet

Name Fortex Engineering Limited
Full address Unit 16, Freeman Road
District and Country LN6 9AP Nuneaton, Warks

United Kingdom

Tel. +44 (0) 1522 718168

e-mail address of the competent person

responsible for the Safety Data Sheet sales@fortex.co.uk

1.4. Emergency telephone number

For urgent inquiries refer to +44 (0) 1522 718168 - 08:30 - 17: 00 Monday to Friday - or you can call the nearest

hospital showing the SDS

#### **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:

Carcinogenicity, category 2 H351 Suspected of causing cancer. Suspected of damaging the unborn child. Reproductive toxicity, category 2 H361d Acute toxicity, category 4 H302 Harmful if swallowed. Skin corrosion, category 1B H314 Causes severe skin burns and eye damage. Serious eye damage, category 1 H318 Causes serious eye damage. Skin sensitization, category 1 H317 May cause an allergic skin reaction. Hazardous to the aquatic environment, chronic toxicity, Toxic to aquatic life with long lasting effects. H411

category 2

#### 2.2. Label elements



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

#### Hazard pictograms:









Signal words: Danger

#### Hazard statements:

**H351** Suspected of causing cancer.

**H361d** Suspected of damaging the unborn child.

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.
 H317 May cause an allergic skin reaction.
 H411 Toxic to aquatic life with long lasting effects.

## Precautionary statements:

P260 Do not breathe dust / fume / gas / mist / vapours / spray.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue

rinsing.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

P280 Wear protective gloves/ protective clothing / eye protection / face protection.

P310 Immediately call a POISON CENTER / doctor.
P264 Wash thoroughly with soap and water after use.

Contains: THIOUREA

TIN(II)CHLORIDE CITRIC ACID

#### 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)

THIOUREA

CAS 62-56-6 50 ≤ x < 75 Carc. 2 H351, Repr. 2 H361d, Acute Tox. 4 H302, Aquatic Chronic 2 H411



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FC 200-543-5

INDEX 612-082-00-0

Reg. no. 02-2119752577-29-0000

CITRIC ACID

CAS 77-92-9  $15 \le x < 30$  Eye Irrit. 2 H319

EC 201-069-1

INDEX -

Reg. no. 02-2119752805-32-0000

TIN(II)CHLORIDE

CAS 7772-99-8 5 ≤ x < 15 Acute Tox. 4 H302, Skin Corr. 1B H314, Eye Dam. 1 H318, STOT SE 3 H335,

Skin Sens. 1 H317

EC 231-868-0

INDEX -

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: Irrigate copiously with clean, fresh water keeping eyelids open, for at least 15 minutes. Seek medical advice.

SKIN: Wash immediately with plenty of water and soap. Remove contaminated clothing. If irritation persists, seek medical attention. Wash contaminated clothing before using them again.

INHALATION: Move the person to open air. If breathing is irregular, seek medical advice.

INGESTION: Obtain immediate medical attention showing the safety data sheet. Induce vomiting. Never give anything by mouth to an unconscious person.

#### 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

Follow doctor's orders

#### **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

Do not breathe combustion products.



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## 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. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

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

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

#### 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

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.

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

Before handling the product, consult all the other sections of this material safety data sheet. Avoid leakage of the product into the environment. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat.

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

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Keep containers away from any incompatible materials, see section 10 for details.

## 7.3. Specific end use(s)

Information not available

#### **SECTION 8. Exposure controls/personal protection**



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#### 8.1. Control parameters

Türkiye

#### Regulatory References:

CZF Česká Republika Nařízení vlády č. 246/2018 Sb. Nařízení vlády, kterým se mění nařízení vlády č. 361/2007 Sb., kterým se

stanoví podmínky ochrany zdraví při práci, ve znění pozdějších předpisů LÍMITES DE EXPOSICIÓN PROFESIONAL PARA AGENTES QUÍMICOS EN ESPAÑA 2019 (INSST) ESP España

United Kingdom GBR EH40/2005 Workplace exposure limits (Third edition, published 2018)

ROZPORZĄDZENIE MINISTRA RODZINY, PRACY I POLITYKI SPOŁECZNEJ z dnia 12 czerwca 2018 r POL Polska SVK Slovensko

Nariadenie vlády č. 33/2018 Z. z. Nariadenie vlády Slovenskej republiky, ktorým sa mení a dopĺňa

nariadenie vlády Slovenskej republiky č. 355/2006 Z. z. o ochrane zamestnancov pred rizikami súvisiacimi s expozíciou chemickým faktorom pri práci v znení neskorších predpisov

KİMYASAL MADDELERLE ÇALIŞMALARDA SAĞLIK VE GÜVENLİK ÖNLEMLERİ HAKKINDA

YÖNETMELİK - Resmi Gazete Tarihi: 12.08.2013 Resmi Gazete Sayısı: 28733

TLV-ACGIH **ACGIH 2019** 

Туре	Country	TWA/8h		STEL/15min		Remarks / Observations	
		mg/m3	ppm	mg/m3	ppm		
TLV	CZE	2		4		SKIN	Jako Sn
VLA	ESP	2					Como Sn
WEL	GBR	2		4			As Sn
NDS/NDSCh	POL	2				INHAL	Na Sn
NPEL	SVK	2		4			Ako Sn
ESD	TUR	2					
TLV-ACGIH		2					

#### Legend:

TUR

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

#### 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

Protect hands with category III work gloves (see standard EN 374).

The following should be considered when choosing work glove material: 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 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**



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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, use a mask with a type A filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.

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.

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

#### **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.

## **SECTION 9. Physical and chemical properties**

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

Appearance powder

Colour straw yellow

Odour odourless

Odour threshold Not available

pH <2

Melting point / freezing point Not available Initial boiling point Not available Boiling range Not available > 60 °C Flash point **Evaporation Rate** Not available Flammability of solids and gases Not available Lower inflammability limit Not available Upper inflammability limit Not available Lower explosive limit Not available Upper explosive limit Not available Vapour pressure Not available Not available Vapour density

Relative density 1,53

Solubility soluble in water

Partition coefficient: n-octanol/water Not available

Auto-ignition temperature Not available

Decomposition temperature Not available



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Viscosity Not available
Explosive properties Not available
Oxidising properties Not available

#### 9.2. Other information

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.

THIOUREA

Above 135°C/275°F it rearranges to form ammonium thiocyanate.

TIN(II)CHLORIDE

Hygroscopic.Decomposes under the effect of heat.

When heated rapidly is absorbs oxygen to form insoluble oxychloride.

## 10.2. Chemical stability

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

THIOUREA

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.

THIOUREA

Reacts violently developing heat on contact with: strong acids.

Avoid contact with: oxidising agents.

## TIN(II)CHLORIDE

Risk of explosion on contact with: hydrazine,metal nitrites,sodium.May react dangerously with: hydrogen peroxide,strong bases,strong oxidants,ethylene oxide,hydrated hydrazine,potassium,sodium,bromine trifluoride,calcium carbide.

#### 10.4. Conditions to avoid



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None in particular. However the usual precautions used for chemical products should be respected.

THIOUREA

Avoid exposure to: sources of heat,naked flames.

#### 10.5. Incompatible materials

THIOUREA

Incompatible with: strong acids,oxidising agents,strong bases,peroxides.

#### 10.6. Hazardous decomposition products

THIOUREA

Develops: carbon oxides, nitric oxide, sulphur oxides, ammonia.

When heated beyond the melting point it can release toxic ammonia vapours, sulphurous anhydride, sulphur.

TIN(II)CHLORIDE

May develop: hydrochloric acid,chlorine,tin,tin oxides.

## **SECTION 11. Toxicological information**

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.

It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

#### 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



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## **ACUTE TOXICITY**

LC50 (Inhalation) of the mixture:
Not classified (no significant component)
LD50 (Oral) of the mixture:
1555,56 mg/kg
LD50 (Dermal) of the mixture:
Not classified (no significant component)

CITRIC ACID

LD50 (Oral) 3000 mg/kg Rat

TIN(II)CHLORIDE

LD50 (Oral) 700 mg/kg Rat

THIOUREA

LD50 (Oral) 1750 mg/kg Rat

LD50 (Dermal) > 2800 mg/kg Rabbit

## SKIN CORROSION / IRRITATION

Corrosive for the skin Classification according to the experimental Ph value

## SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye damage

#### RESPIRATORY OR SKIN SENSITISATION

Sensitising for the skin

#### GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

#### CARCINOGENICITY

Suspected of causing cancer

### REPRODUCTIVE TOXICITY



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Suspected of damaging the unborn child

#### 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

## **SECTION 12. Ecological information**

This product is dangerous for the environment and is toxic for aquatic organisms. In the long term, it have negative effects on acquatic environment. **12.1. Toxicity** 

CITRIC ACID

LC50 - for Fish 440 mg/l/96h Leuciscus idus
EC50 - for Algae / Aquatic Plants 120 mg/l/72h Daphnia Magna

THIOUREA

LC50 - for Fish 10000 mg/l/96h EC50 - for Crustacea 35 mg/l/48h

#### 12.2. Persistence and degradability

CITRIC ACID

Entirely degradable

TIN(II)CHLORIDE Rapidly degradable

**THIOUREA** 

Solubility in water 13600 mg/l

NOT rapidly degradable

#### 12.3. Bioaccumulative potential

Information not available

## 12.4. Mobility in soil



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**THIOUREA** 

Partition coefficient: soil/water -0,92

#### 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.

## **SECTION 14. Transport information**

## 14.1. UN number

ADR / RID, IMDG, 2922

IATA:

## 14.2. UN proper shipping name

ADR / RID: CORROSIVE LIQUID, TOXIC, N.O.S. (TIN(II)CHLORIDE; THIOUREA)

IMDG: CORROSIVE LIQUID, TOXIC, N.O.S. (TIN(II)CHLORIDE; THIOUREA)

IATA: CORROSIVE LIQUID, TOXIC, N.O.S. (TIN(II)CHLORIDE; THIOUREA)

## 14.3. Transport hazard class(es)

ADR / RID: Class: 8 Label: 8 (6.1)

IMDG: Class: 8 Label: 8 (6.1)

IATA: Class: 8 Label: 8 (6.1)







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#### 14.4. Packing group

ADR / RID, IMDG,

Ш

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: 86 Limited

Quantities: 1 restriction L code: (E)

Special Provision: 
IMDG: EMS: F-A, S-B Limited

Quantities: 1

IATA: Cargo:

\_ Maximum

quantity: 30 L instructions:

855 Packaging

Tunnel

Packaging

Pass.: Maximum

quantity: 1 L instructions:

Special Instructions: A3, A803

### 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: E2

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

Product

Point 3

### 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%.



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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:

Carc. 2 Carcinogenicity, category 2

Repr. 2 Reproductive toxicity, category 2

Acute Tox. 4 Acute toxicity, category 4

Skin Corr. 1B Skin corrosion, category 1B

Eye Dam. 1 Serious eye damage, category 1

Eye Irrit. 2 Eye irritation, category 2

STOT SE 3 Specific target organ toxicity - single exposure, category 3

Skin Sens. 1 Skin sensitization, category 1

Aquatic Chronic 2 Hazardous to the aquatic environment, chronic toxicity, category 2

H351 Suspected of causing cancer.

H361d Suspected of damaging the unborn child.

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.
 H319 Causes serious eye irritation.
 H335 May cause respiratory irritation.
 H317 May cause an allergic skin reaction.



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H411

Toxic to aquatic life with long lasting effects.

#### 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

- 1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
- 2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
- 3. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament 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 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) 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.



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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.