Safety data sheet

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

1.1. Product identifier

Code:	**Z356**
Product name	**Zinco Puro EP 2 kg**
Chemical name and synonym	**Protettivo verniciante**

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

Intended use **Zinc protective**

1.3. Details of the supplier of the safety data sheet

Name	**GNOCCHI ECO- SPRAY S.R.L.**
Full address	**Via per Pavone del Mella sn**
District and Country	**25020 Cigole (BS)** **Italia**
	Tel. +39 030 9959674
	Fax +39 030 959265
e-mail address of the competent person	
responsible for the Safety Data Sheet	**info@gnocchiecospray.com**

1.4. Emergency telephone number

For urgent inquiries refer to **CENTRO ANTIVELENI Ospedale Niguarda tel: +39 02 66101029**

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 EC Regulation 1907/2006 and subsequent amendments. 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:

Flammable liquid, category 3	H226	Flammable liquid and vapour.
Specific target organ toxicity - repeated exposure, category 1	H372	Causes damage to organs through prolonged or repeated exposure.
Aspiration hazard, category 1	H304	May be fatal if swallowed and enters airways.
Hazardous to the aquatic environment, acute toxicity, category 1	H400	Very toxic to aquatic life.
Hazardous to the aquatic environment, chronic toxicity, category 1	H410	Very toxic 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.

Signal words: Danger

Hazard statements:

H226	Flammable liquid and vapour.
H372	Causes damage to organs through prolonged or repeated exposure.
H304	May be fatal if swallowed and enters airways.
H410	Very toxic to aquatic life with long lasting effects.
EUH208	Contains: 2-BUTANONE OXIME May produce an allergic reaction.

Precautionary statements:

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P264	Wash . . . thoroughly after handling.
P280	Wear protective gloves / eye protection / face protection.
P301+P310	IF SWALLOWED: immediately call a POISON CENTER / doctor / . . .
P303+P361+P353	IF ON SKIN (or hair): take off immediately all contaminated clothing. Rinse skin with water / shower.

Contains: NAPHTHA (PETROL.) HYDRODESULFURIZED HEAVY

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.

3.1. Substances.

Information not relevant.

3.2. Mixtures.

Contains:

Identification.	**Conc. %.**	**Classification 1272/2008 (CLP).**
ZINC POWDER - ZINC DUST (100% - metallic element) CAS. 7440-66-6 EC. 231-175-3 INDEX. 030-001-01-9	54 - 58	Aquatic Acute 1 H400 M=10, Aquatic Chronic 1 H410 M=10
NAPHTHA (PETROL.) HYDRODESULFURIZED HEAVY CAS. 64742-82-1	10,5 - 12	STOT RE 1 H372, Asp. Tox. 1 H304, Note P

EC. 265-185-4

INDEX. 649-330-00-2

ZINC OXIDE (80,34% - metallic element)

CAS. 1314-13-2 — 4 - 4,5 — Aquatic Acute 1 H400 M=1, Aquatic Chronic 1 H410

EC. 215-222-5

INDEX. 030-013-00-7

XYLENE (MIXTURE OF ISOMERS)

CAS. 1330-20-7 — 2 - 2,5 — Flam. Liq. 3 H226, Acute Tox. 4 H312, Acute Tox. 4 H332, Skin Irrit. 2 H315, Note C

EC. 215-535-7

INDEX. 601-022-00-9

ALUMINIUM POWDER (STABILIZED) (100% - metallic element)

CAS. 7429-90-5 — 1 - 1,5 — Flam. Sol. 1 H228, Water-react. 2 H261, Note T

EC. 231-072-3

INDEX. 013-002-00-1

1-METHOXY-2-PROPANOL

CAS. 107-98-2 — 1 - 1,5 — Flam. Liq. 3 H226, STOT SE 3 H336

EC. 203-539-1

INDEX. 603-064-00-3

2-BUTANONE OXIME

CAS. 96-29-7 — 0,5 - 0,6 — Carc. 2 H351, Acute Tox. 4 H312, Eye Dam. 1 H318, Skin Sens. 1 H317

EC. 202-496-6

INDEX. 616-014-00-0

Note: Upper limit is not included into the range.

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 30-60 minutes, opening the eyelids fully. Get medical advice/attention.
SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention.
INGESTION: Have the subject drink as much water as possible. Get medical advice/attention. Do not induce vomiting unless explicitly authorised by a doctor.
INHALATION: Get medical advice/attention immediately. Remove victim to fresh air, away from the accident scene. If the subject stops breathing, administer artificial respiration. Take suitable precautions for rescue workers.

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

For symptoms and effects caused by the contained substances, see chap. 11.

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
Chemical powder.
UNSUITABLE EXTINGUISHING EQUIPMENT
Do not use water.

5.2. Special hazards arising from the substance or mixture.

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE
No information available.

5.3. Advice for firefighters.

GENERAL INFORMATION
Flammable gases develop in contact with water or moisture.
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. Check incompatibility for container material in section 7. 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.

Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. In order to avoid the risk of fires and explosions, never use compressed air when handling. Open containers with caution as they may be pressurised.

Avoid contact with eyes and skin. Do not breathe powders, vapours or mists. Avoid leakage of the product into the environment. Work in adequately ventilated areas. Avoid flames and sparks. 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 in a well ventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition.

Store only in the original container. Keep the product in clearly labelled containers. Keep containers well sealed. Avoid contact with water or that may absorb moisture at all costs. Avoid violent blows. Avoid overheating. Store in a ventilated and dry place, far away from sources of ignition. 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.

8.1. Control parameters.

Regulatory References:

DEU	Deutschland	MAK-und BAT-Werte-Liste 2012
ESP	España	INSHT - Límites de exposición profesional para agentes químicos en España 2015
FRA	France	JORF n°0109 du 10 mai 2012 page 8773 texte n° 102
GRB	United Kingdom	EH40/2005 Workplace exposure limits
ITA	Italia	Decreto Legislativo 9 Aprile 2008, n.81
POL	Polska	ROZPORZĄDZENIE MINISTRA PRACY I POLITYKI SPOŁECZNEJ z dnia 16 grudnia 2011r
EU	OEL EU	Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC.
	TLV-ACGIH	ACGIH 2014

NAPHTHA (PETROL.) HYDRODESULFURIZED HEAVY

Threshold Limit Value.

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
VLA	ESP	290	50	580	100	SKIN.

NDS	POL	300		900		

XYLENE (MIXTURE OF ISOMERS)

Threshold Limit Value.

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
AGW	DEU	440	100	880	200	SKIN.
MAK	DEU	440	100	880	200	SKIN.
VLA	ESP	221	50	442	100	SKIN.
VLEP	FRA	221	50	442	100	SKIN.
WEL	GRB	220	50	441	100	
TLV	ITA	221	50	442	100	SKIN.
NDS	POL	100				
OEL	EU	221	50	442	100	SKIN.
TLV-ACGIH		434	100	651	150	

1-METHOXY-2-PROPANOL

Threshold Limit Value.

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
AGW	DEU	370	100	740	200	
MAK	DEU	370	100	740	200	
VLA	ESP	375	100	568	150	SKIN.
VLEP	FRA	188	50	375	10	SKIN.
WEL	GRB	375	100	560	150	SKIN.
TLV	ITA	375	100	568	150	SKIN.
NDS	POL	180		360		
OEL	EU	375	100	568	150	SKIN.
TLV-ACGIH		184	50	368	100	

Legend:

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

TLV of solvent mixture: 299 mg/m3.

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. Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Exposure levels must be kept as low as possible to avoid significant build-up in the organism. Manage personal protective equipment so as to guarantee maximum protection (e.g. reduction in replacement times).

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 III professional long-sleeved overalls and safety footwear (see Directive 89/686/EEC and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

Consider the appropriateness of providing antistatic clothing in the case of working environments in which there is a risk of explosion.

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, 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	dense liquid
Colour	dark grey
Odour	characteristic of solvent
Odour threshold.	Not available.
pH.	Not available.
Melting point / freezing point.	Not available.
Initial boiling point.	< Not applicable.
Boiling range.	Not available.
Flash point.	< 38 °C.
Evaporation Rate	Not available.
Flammability of solids and gases	flammable solid
Lower inflammability limit.	Not available.
Upper inflammability limit.	Not available.
Lower explosive limit.	Not available.
Upper explosive limit.	Not available.
Vapour pressure.	Not available.
Vapour density	Not available.
Relative density.	Not available.
Solubility	insoluble
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.

Solid content.	60,00 %
VOC (Directive 2010/75/EC) :	15,00 %
VOC (volatile carbon) :	12,32 %

SECTION 10. Stability and reactivity.

10.1. Reactivity.

1-METHOXY-2-PROPANOL: absorbs and disolves in water and in organic solvents, dissolves various plastic materials; it is stable but with air it may slowly form explosive peroxides.
2-BUTANONE OXIME: decomposes under the effect of heat.

10.2. Chemical stability.

Information not available.

10.3. Possibility of hazardous reactions.

The product may react violently with water.

ZINC POWDER - ZINC DUST: risk of explosion on contact with: ammonium nitrate, ammonium sulphide, barium peroxide, lead nitride, chlorates, chromium trioxide, sodium hydroxide solutions, oxidising agents, performic acid, acids, tetrachloromethane, water. May react dangerously with alkali hydroxides, bromine pentafluoride, calcium chloride solution, fluorine, hexachloroethane, nitrobenzene, potassium dioxide, carbon disulphide, silver. Reacts with acids and strong alkalis developing hydrogen.
XYLENE (MIXTURE OF ISOMERS): stable, but may develop violent reactions in the presence of strong oxidising agents such as sulphuric and nitric acids and perchlorates. May form explosive mixtures with the air.
1-METHOXY-2-PROPANOL: can react dangerously with strong oxidising agents and strong acids.
2-BUTANONE OXIME: thermal decomposition can have an explosive course. It reacts violently with strong oxidising agents and acids. Above the flash point (69°C/156°F), explosive mixtures can form with air.

10.4. Conditions to avoid.

Avoid overheating. Prevent moisture or water from penetrating inside the containers.

1-METHOXY-2-PROPANOL: avoid exposure to the air.

10.5. Incompatible materials.

ZINC POWDER - ZINC DUST: water, strong alkalis and acids.
1-METHOXY-2-PROPANOL: oxidising agents, strong acids and alkaline metals.
2-BUTANONE OXIME: oxidising substances and strong acids.

10.6. Hazardous decomposition products.

2-BUTANONE OXIME: nitrogen oxides, carbon oxides.

SECTION 11. Toxicological information.

11.1. Information on toxicological effects.

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.
This product may cause functional disorders or morphological mutations after repeated or prolonged exposure and/or may accumulate inside the human body and is thus graded as dangerous.
The introduction of even small quantities of this liquid into the respiratory system in case of ingestion or vomit may cause bronchopneumonia and pulmonary edema.
This product contains sensitizing substance/s and may cause allergic reactions.

XYLENE (MIXTURE OF ISOMERS): has a toxic effect on the CNS (encephalopathies). Irritating to the skin, conjunctivae, cornea and respiratory apparatus.
1-METHOXY-2-PROPANOL: the main way of entry is the skin, whereas the respiratory way is less important owing to the low vapour tension of the product. Concentrations above 100 ppm cause eye irritation, nose and oropharynx. At 1000 ppm disturbance in the equilibrium and severe eye irritation is observed. Clinical and biological examinations carried out on exposed volunteers revealed no anomalies. Acetate produces greater skin and ocular irritation on direct contact. No chronic effects have been reported in man.

XYLENE (MIXTURE OF ISOMERS)
LD50 (Oral).3523 mg/kg Rat
LD50 (Dermal).4350 mg/kg Rabbit
LC50 (Inhalation).26 mg/l/4h Rat

1-METHOXY-2-PROPANOL
LD50 (Oral).5300 mg/kg Rat
LD50 (Dermal).13000 mg/kg Rabbit
LC50 (Inhalation).54,6 mg/l/4h Rat

2-BUTANONE OXIME
LD50 (Oral).2400 mg/kg Rat
LD50 (Dermal).> 1000 mg/kg Rabbit
LC50 (Inhalation).20 mg/l/4h Rat

NAPHTHA (PETROL.) HYDRODESULFURIZED HEAVY
LD50 (Oral).> 5000 mg/kg Rat
LD50 (Dermal).> 2000 mg/kg Rabbit

SECTION 12. Ecological information.

This product is dangerous for the environment and highly toxic for 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

NAPHTHA (PETROL.) HYDRODESULFURIZED HEAVY	
LC50 - for Fish.	8,2 mg/l/96h Pimephales promelas
EC50 - for Crustacea.	4,5 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic	3,1 mg/l/72h Pseudokirchnerella subcapitata

Plants.

ZINC OXIDE

LC50 - for Fish.	1,1 mg/l/96h Oncorhynchus mykiss
EC50 - for Crustacea.	1,7 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants.	0,14 mg/l/72h Pseudokirchnerella subcapitata
Chronic NOEC for Fish.	0,53 mg/l
Chronic NOEC for Algae / Aquatic Plants.	0,024 mg/l

12.2. Persistence and degradability.

ALUMINIUM POWDER (STABILIZED)

Solubility in water.	0 mg/l

Biodegradability: Information not available.

ZINC POWDER - ZINC DUST

Solubility in water.	mg/l 0,1 - 100

Biodegradability: Information not available.

XYLENE (MIXTURE OF ISOMERS)

Solubility in water.	mg/l 100 - 1000

Biodegradability: Information not available.

1-METHOXY-2-PROPANOL

Solubility in water.	mg/l 1000 - 10000

Rapidly biodegradable.

2-BUTANONE OXIME

Solubility in water.	mg/l 1000 - 10000

Entirely biodegradable.

NAPHTHA (PETROL.) HYDRODESULFURIZED HEAVY

Rapidly biodegradable.

ZINC OXIDE

Solubility in water.	2,9 mg/l
Solubility in water.	mg/l 0,1 - 100

Biodegradability: Information not available.

NOT rapidly biodegradable.

12.3. Bioaccumulative potential.

XYLENE (MIXTURE OF ISOMERS)	
Partition coefficient: n-octanol/water.	3,12
BCF.	25,9
1-METHOXY-2-PROPANOL	
Partition coefficient: n-octanol/water.	< 1
2-BUTANONE OXIME	
Partition coefficient: n-octanol/water.	0,63
BCF.	0,5
ZINC OXIDE	
BCF.	> 175

12.4. Mobility in soil.

XYLENE (MIXTURE OF ISOMERS)	
Partition coefficient: soil/water.	2,73
2-BUTANONE OXIME	
Partition coefficient: soil/water.	0,55
NAPHTHA (PETROL.) HYDRODESULFURIZED HEAVY	
Partition coefficient: soil/water.	1,78

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, IATA:	1263

14.2. UN proper shipping name.

ADR / RID:	PAINT or PAINT RELATED MATERIAL MIXTURE
IMDG:	PAINT or PAINT RELATED MATERIAL MIXTURE
IATA:	PAINT or PAINT RELATED MATERIAL MIXTURE

14.3. Transport hazard class(es).

ADR / RID:	Class: 3	Label: 3
IMDG:	Class: 3	Label: 3
IATA:	Class: 3	Label: 3

14.4. Packing group.

ADR / RID, IMDG, IATA:	I

14.5. Environmental hazards.

ADR / RID:	NO
IMDG:	NO
IATA:	NO

14.6. Special precautions for user.

ADR / RID:	HIN - Kemler: 33	Limited Quantities: 0,5 L	Tunnel restriction code: (D/E)

	Special Provision: -		
IMDG:	EMS: F-E, S-E,	Limited Quantities: 0,5 L	
IATA:	Cargo:	Maximum quantity: 30 L	Packaging instructions: 361
	Pass.:	Maximum quantity: 1 L	Packaging instructions: 351
	Special Instructions:	A3, A72	

14.7. Transport in bulk according to Annex II of MARPOL73/78 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. 9i, 6

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

Product.
Point. 3 - 40

Substances in Candidate List (Art. 59 REACH).

None.

Substances subject to authorisarion (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.

No chemical safety assessment has been processed for the mixture and the substances it contains.

SECTION 16. Other information.

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

Flam. Liq. 3	Flammable liquid, category 3
Flam. Sol. 1	Flammable solid, category 1
Carc. 2	Carcinogenicity, category 2
Acute Tox. 4	Acute toxicity, category 4
STOT RE 1	Specific target organ toxicity - repeated exposure, category 1
Asp. Tox. 1	Aspiration hazard, category 1
Eye Dam. 1	Serious eye damage, category 1
Skin Irrit. 2	Skin irritation, category 2
Skin Sens. 1	Skin sensitization, category 1
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 1	Hazardous to the aquatic environment, chronic toxicity, category 1
H226	Flammable liquid and vapour.
H228	Flammable solid.
H261	In contact with water releases flammable gases.
H351	Suspected of causing cancer.
H312	Harmful in contact with skin.
H332	Harmful if inhaled.
H372	Causes damage to organs through prolonged or repeated exposure.
H304	May be fatal if swallowed and enters airways.
H318	Causes serious eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H410	Very 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 (EU) 1907/2006 (REACH) of the European Parliament
2. Regulation (EU) 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
- 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
- ECHA website

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.

Changes to previous review:
The following sections were modified:
02 / 09 / 11.