

## Safety data sheet


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

|              |  |  |
|--------------|--|--|
| 1.1          | <b>Identification</b>                                      |  |
|              | Code   | ESS26102013EME   |
|              | Product name   | <b>Olè RESSENZA EMERALD</b>  |
|              | Description  | Super-concentrated watery mixture of natural and synthetic substances with polyvalent function.  |
| 1.2          | <b>Recommended use and restrictions on use</b>             |  |
|              | Use:   | <p><b>Professional use only.</b><br/>To be used for detergency, sanitation, deodorization, fragrance giving and dust removal from surface and environments.<br/><b>Usage:</b> 1 spray (1 ml) of product in 1 l of water to clean and deodorize any washable surface; 1 spray into drains to neutralize unpleasant odours; sprayed one time on a rug to dust furniture, furnishings and frequently used objects.</p> <p>RESTRICTIONS ON USE:<br/>DO NOT vaporize pure in the environment, but vaporize it from a distance of 20 cm on a surface/rug/water container to minimize a possible insurgence of respiratory allergenic reaction.<br/>DO NOT breath directly the vapour or the aerosol of pure product.<br/>It is recommended NOT use the product for purposes other than those provided.</p> |
| 1.3          | <b>Details of the safety data sheet supplier</b>           |  |
|              | Name   | RUBINO CHEM S.r.l.   |
|              | Full address   | Via Vigili del Fuoco Caduti in Servizio, 14/s INT.4  |
|              | District and Country                                       | 70026 Modugno  |
|              |  | tel. (+39) 080 5035348   |
|              |  | Fax (+39) 080 5008545  |
|              | E-mail of the responsible person for the Safety Data Sheet | <a href="mailto:customerservice@rubinochem.it">customerservice@rubinochem.it</a>   |
| Manufacturer | RUBINO CHEM S.r.l.   |  |
| 1.4          | <b>Emergency telephone number</b>                          |  |
|              | For urgent inquiries:                                      | United Kingdom:<br>NHS 111 service if you urgently need medical help or advice but it's not a life-threatening situation. For immediate, life-threatening emergencies, continue to call 999.   |

### SECTION 2. Hazards identification

|     |  |
|-----|--|
| 2.1 | <b>Classification of the substance or mixture</b>  |
|     | 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.<br>Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet. |

|  |      |  |
|--|------|--|
| <u>Hazard classification and indication:</u>                       |      |  |
| Skin sensitization, category 1                                     | H317 | May cause an allergic skin reaction.               |
| Hazardous to the aquatic environment, chronic toxicity, category 3 | H412 | Harmful to aquatic life with long lasting effects. |

|               |   |   |
|---------------|---|---|
| 2.2           | <b>Label elements.</b>  |   |
|               | Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.   |   |
|               | Hazard pictograms:  |  |
|               | Signal words:   | Warning   |
|               | Hazard statements:  |   |
|               | <b>H317</b>   | May cause an allergic skin reaction.  |
|               | <b>H412</b>   | Harmful to aquatic life with long lasting effects.                                |
| <b>EUH208</b> | Contains: Benzyl Salicylate, Hexyl Cinnamal, Coumarin, Alpha Isomethyl Ionone, Citronellol, Limonene, Eugenol, Linalool, Tetramethyl Acetyloctahydronaphthalenes, Hexyl Salicylate, 4-Tert-butylcyclohexyl Acetate.<br><b>May produce an allergic reaction.</b> |   |

|                           |   |
|---------------------------|---|
| Precautionary statements: |   |
| <b>P102</b>               | Keep out of the reach of children.  |
| <b>P261</b>               | Avoid breathing vapours and spray.  |
| <b>P280</b>               | Wear protective gloves.   |
| <b>P302+P352</b>          | IF ON SKIN: Wash with plenty of water.  |
| <b>P333+P313+P312</b>     | If skin irritation or rash occurs: Get medical advice / attention. Call a POISON CENTER if you feel unwell. |
| <b>P362+P364</b>          | Take off contaminated clothing and wash it before reuse.  |
| <b>P501</b>               | Dispose of contents/container in accordance to national law.  |

|     |   |
|-----|---|
| 2.3 | <b>Other hazards.</b>   |
|     | 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 | <b>Substances</b>                                 |
|     | Irrelevant information. The product is a mixture. |

|     |                       |                          |
|-----|-----------------------|--------------------------|
| 3.2 | <b>Mixtures</b>       |                          |
|     | <b>Contains:</b>      |                          |
|     | <b>Identification</b> | <b>Concentration (%)</b> |

|  |            |   |
|--|------------|---|
| <b>Reaction Mass of 1-(1,2,3,4,5,6,7,8-octahydro-2,3,8,8-tetramethyl-2-naphthyl)ethan-1-one and 1-(1,2,3,4,6,7,8,8a-octahydro-2,3,8,8-tetramethyl-2-naphthyl)ethan-1-one and 1-(1,2,3,5,6,7,8,8a-octahydro-2,3,8,8-tetramethyl-2-naphthyl)ethan-1-one</b><br>CAS /<br>CE 915-730-3 | 2-3        | Skin Irrit. 2 H315,<br>Skin Sens. 1 H317,<br>Aquatic Chronic 1 H410                             |
| <b>HEXYL SALICYLATE</b><br>CAS 6259-76-3<br>CE 228-408-6   | 0,5 - 1    | Skin Irrit. 2 H315,<br>Skin Sens. 1 H317,<br>Aquatic Chronic 1 H410                             |
| <b>Benzyl Salicylate</b><br>CAS 118-58-1<br>CE 204-262-9   | 0,5 - 1    | Skin Sens. 1 H317,<br>Aquatic Chronic 3 H412<br>Eye Irrit. 2 H319                               |
| <b>Hexamethylindanopyran</b><br>CAS 1222-05-5<br>CE 214-946-9  | 0,5 - 1    | Aquatic Chronic 1 H410<br>Aquatic Acute 1 H400 M=1,   |
| <b>Quaternary ammonium compounds, benzyl-C12-14 (even-numbered)-alkyldimethyl, chlorides</b><br>CAS 68424-85-1<br>CE 207-325-2   | 0,25 – 0,5 | Acute Tox. 4 H302,<br>Skin Corr. 1B H314,<br>Aquatic Acute 1 H400 M=1<br>Aquatic Chronic 1 H410 |
| <b>2,2,2-trichloro-1-phenylethyl acetate</b><br>CAS 90-17-5<br>CE 201-972-0  | 0,1-0,5    | Aquatic Chronic 3 H412  |
| <b>Alpha Hexyl Cinnamic aldehyde</b><br>CAS 101-86-0<br>CE 202-983-3   | 0,1-0,5    | Skin Sens. 1 H317,<br>Aquatic Acute 1 H400 M=1<br>Aquatic Chronic 2 H411                        |
| <b>Cumarina</b><br>CAS 91-64-5<br>CE 202-086-7   | 0,1-0,5    | Skin Sens. 1 H317<br>Harmful if swallowed H302<br>Aquatic Chronic 3 H412                        |
| <b>METHYL IONONE GAMMA</b><br>CAS 1335-46-2<br>CE 215-635-0  | 0,1-0,5    | Aquatic Chronic 2 H411<br>Eye Irrit. 2 H319<br>Skin Irrit. 2 H315,                              |

|  |   |         |   |
|--|---|---------|---|
|  | <b>1-(5,6,7,8-tetrahydro-3,5,5,6,8,8-hexamethyl-2-naphthyl)ethan1-one</b> | 0,1-0,5 | Aquatic Chronic 1 H410<br>Aquatic Acute 1 H400 M=1,<br>Harmful if swallowed H302        |
|  | CAS 1506-02-1   |         |   |
|  | CE 216-133-4  |         |   |
|  | <b>4-tert-butylcyclohexyl acetate</b>                                     | 0,1-0,5 | Skin Sens. 1 H317   |
|  | CAS 32210-23-4  |         |   |
|  | CE 250-954-9  |         |   |
|  | <b>1,2,3,5,6,7-hexahydro-1,1,2,3,3-pentamethyl-4H-inden-4-one</b>         | 0,1-0,5 | Skin Irrit. 2 H315,<br>Skin Sens. 1 H317<br>Eye Irrit. 2 H319<br>Aquatic Chronic 2 H411 |
|  | CAS 33704-61-9  |         |   |
|  | CE 251-649-3  |         |   |
|  | <b>Linalolo</b>   | <0,1    | Skin Irrit. 2 H315,<br>Skin Sens. 1 H317<br>Eye Irrit. 2 H319                           |
|  | CAS 78-70-6   |         |   |
|  | CE 201-134-4  |         |   |

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 | <b>Description of first aid measures</b>                                   |  |
|     | <b>EYES</b>  | 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. |
|     | <b>SKIN</b>  | Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention immediately. Wash contaminated clothing before using it again.        |
|     | <b>INHALATION</b>  | Remove to open air. If the subject stops breathing, administer artificial respiration. Get medical advice/attention immediately.                                       |
|     | <b>INGESTION</b>   | Get medical advice/attention immediately. Do not induce vomiting. Do not administer anything not explicitly authorized by a doctor.                                    |
| 4.2 | <b>Most important symptoms and effects (acute and delayed)</b>             |  |
|     | For symptoms and effects caused by the contained substances, see chap. 11. |  |
| 4.3 | <b>Indication in case of emergency of medical and special treatments</b>   |  |
|     | Information not available.   |  |

#### SECTION 5. Firefighting measures

|     |  |  |
|-----|--|--|
| 5.1 | <b>Extinguishing media</b>   |  |
|     | SUITABLE EXTINGUISHING EQUIPMENT   | Extinguishing substances are: carbon dioxide and chemical powder. For product loss or leakage that has not caught fire, water spray can be used to disperse flammable vapours and protect those trying to stem the leak. |
|     | UNSUITABLE EXTINGUISHING EQUIPMENT   | Do not use jets of water.<br>Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.  |
| 5.2 | <b>Special hazards arising from the substance or mixture</b>   |  |
|     | HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE<br>If large quantities of the product are involved in a fire, they can make it considerably worse. Do not breathe combustion products. |  |
|     | <b>Advice for firefighters</b>   |  |

|     |  |
|-----|--|
| 5.3 | <b>GENERAL INFORMATION</b><br>In the case of fire, use jets of water to cool the containers to prevent the risk of explosions (product decomposition and excess pressure) and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Remove all containers containing the product from the fire, if it is safe to do so. |
|     | <b>SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS</b><br>Normal firefighting 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 | <b>Personal precautions, protective equipment and emergency procedures</b><br>Block the leakage if there is no hazard.<br>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.   |
|     | <b>Environmental precautions</b><br>The product must not penetrate into the sewer system or come into contact with surface water or ground water.   |
| 6.2 | <b>Methods and material for containment and cleaning up</b><br>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.<br>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. |
|     | <b>Reference to other sections</b><br>Any information on personal protection and disposal is given in sections 8 and 13.  |

**SECTION 7. Handling and storage**

|     |   |
|-----|---|
| 7.1 | <b>Precautions for safe handling</b><br>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. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat. Avoid leakage of the product into the environment. |
|     | <b>Conditions for safe storage, including any incompatibilities</b><br>Store only in the original container. Store in a well ventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition. Keep containers away from any incompatible materials, see section 10 for details.   |
| 7.2 | <b>Specific end use(s)</b><br>Information not available.  |

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

|     |   |
|-----|---|
| 8.1 | <b>Control parameters</b><br>Information not available.   |
|     | <b>Exposure controls</b><br>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.<br>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 Directive 89/686/EEC and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

**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 B 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.

**EYE PROTECTION**

Wear airtight protective goggles (see standard EN 166).

**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                       | <b>Information on basic physical and chemical properties</b> |   |
|                           | Appearance   | WHITE LIQUID  |
|                           | Odour  | SCENTS  |
|                           | Odour threshold  | Not available   |
|                           | pH   | 6.6± 0.1  |
|                           | Meltingpoint / freezingpoint                                 | Not available   |
|                           | Initial boiling point or boiling range                       | 100.5 ± 0.5 (°C)                                      |
|                           | Flash point  | > 60 °C   |
|                           | Evaporation rate   | Not available.  |
|                           | Flammability (solid, gas)                                    | Not available.  |
|                           | Upper/ Lower inflammability or explosive limit               | Not available.  |
|                           | Vapour pressure  | Not available.  |
|                           | Vapour density   | 1.003 ± 0.001   |
|                           | Relative density   | Not available.  |
|                           | Solubility   | Solubility in water                                   |
|                           | Partition coefficient: n-octanol/water                       | Not available.  |
| Auto-ignition temperature | Not available.   |   |
| Decomposition temperature | Not available  |   |
| Viscosity                 | 1.8 ± 0.1  |   |
| Explosive properties      | Not available.   |   |
| Oxidising properties      | Not available.   |   |
| 9.2                       | <b>Other information</b>                                     |   |
|                           | VOC (Directive 1999/13/CE)                                   | 0.07 ± 0.02 (g COV / g sample)<br>(equal to: 7% ± 2%) |

**SECTION 10. Stability and reactivity.**

|      |  |
|------|--|
| 10.1 | <b>Reactivity</b><br>There are no particular risks of reaction with other substances in normal conditions of use.                |
| 10.2 | <b>Chemical stability</b><br>The product is stable in normal conditions of use and storage.                                      |
| 10.3 | <b>Possibility of hazardous reactions.</b><br>No hazardous reactions are foreseeable in normal conditions of use and storage.    |
| 10.4 | <b>Conditions to avoid.</b><br>None in particular. However the usual precautions used for chemical products should be respected. |
| 10.5 | <b>Incompatible materials.</b><br>Information not available.   |
| 10.6 | <b>Hazardous decomposition products.</b><br>Information not available.   |

**SECTION 11. Toxicological information**

|      |  |                    |  |  |
|------|--|--------------------|--|--|
| 11.1 | <b>Information on toxicological effects</b>  |                    |  |  |
|      | <p>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.</p> <p>Upon contact with skin, this product causes sensitization (dermatitis). Dermatitis derives from skin irritation on the areas which repeatedly come into contact with the sensitizing agent. Cutaneous lesions may include: erythemas, edemas, papules, vesicles, pustules, scurvies, ulcerations and exudative phenomena, whose intensity varies according to illness seriousness and affected areas. Erythemas, edemas and exudative phenomena prevail during the acute phase. Scurfy skin, dryness, ulcerations and skin thickening prevail during the chronic phase.</p> <p>This product contains sensitizing substance/s and may cause allergic reactions.</p> |                    |  |  |
|      | Toxicological information about component substances:  |                    |  |  |
|      | Substance:   |                    |  |  |
|      | <b>1-(1,2,3,4,5,6,7,8-OCTAHYDRO-2,3,8,8-TETRAMETHYL-2-NAPHTHALENYL)ETHANONE</b>  |                    |  |  |
|      | LD50 (Orale)   | >5000 mg/kg Rat    |  |  |
|      | LD50 (Dermal)  | >5000 mg/kg Rabbit |  |  |
|      | Substance:   |                    |  |  |
|      | <b>HEXAHYDRO-HEXAMETHYL-CYCLOPENTA-GAMMA-2-BENZOPYRAN CAS 1222-05-5</b>  |                    |  |  |
|      | LD50 (Oral)  | >3000 mg/kg rat    |  |  |
|      | LD50 (Dermal)  | >6500 mg/kg Rat    |  |  |
|      | LC50(Inhalation)   | >3000 mg/kg Rat    |  |  |

**SECTION 12. Ecological information.**

This product is dangerous for the environment and the aquatic organisms with long term negative effects on the aquatic environment.

|      |                                      |             |             |                       |                            |
|------|--------------------------------------|-------------|-------------|-----------------------|----------------------------|
| 12.1 | <b>Toxicity</b>                      |             |             |                       |                            |
|      | <b>HEXAHYDRO-HEXAMETHYL-</b>         | <b>LC50</b> | <b>Fish</b> | <b>0,47 mg/l /96h</b> | <b>Lepomis macrochirus</b> |
|      | <b>CYCLOPENTA-GAMMA-2-BENZOPYRAN</b> |             | <b>EC50</b> | <b>Dafnie</b>         | <b>0,3 mg/l/48h</b>        |
|      | <b>Daphnia magna</b>                 |             |             |                       |                            |
| 12.2 | <b>Persistence and degradability</b> |             |             |                       |                            |
|      | Information not available.           |             |             |                       |                            |

|      |  |   |
|------|--|---|
| 12.3 | <b>Bioaccumulative potential</b>   | Partition coefficient: n-octanol/water. 2   |
|      | <b>1,3,4,6,7,8-HEXAHYDRO-4,6,6,7,8,8-HEXAMETHYLCYCLOPENTA-GAMMA-2-BENZOPYRAN</b> |   |
| 12.4 | <b>Mobility in soil</b>  | Information not available.  |
|      |  |   |
| 12.5 | <b>Results of PBT and vPvB assessments</b>                                       | On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%. |
|      |  |   |
| 12.6 | <b>Other adverse effects</b>   | Information not available   |
|      |  |   |

**SECTION 13. Disposal considerations.**

|      |                                 |   |
|------|---------------------------------|---|
| 13.1 | <b>Waste treatment methods.</b> | 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.<br>Disposal must be performed through an authorized waste management firm, in compliance with national and local regulations. |
|      |                                 |   |
|      | CONTAMINATED PACKAGING          | Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.   |

**SECTION 14. Transport information.**

|      |  |                           |
|------|--|---------------------------|
| 14.1 | <b>UN number</b>   | Not applicable.           |
|      |  |                           |
| 14.2 | <b>UN proper shipping name</b>   | Not applicable.           |
|      |  |                           |
| 14.3 | <b>Transport hazard class(es)</b>  | Not applicable.           |
|      |  |                           |
| 14.4 | <b>Packing group.</b>  | Not applicable.           |
|      |  |                           |
| 14.5 | <b>Environmental hazards</b>   | Not applicable.           |
|      |  |                           |
| 14.6 | <b>Special precautions for user</b>  | Not applicable.           |
|      |  |                           |
| 14.7 | <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Information not relevant. |
|      |  |                           |

**SECTION 15. Regulatory information**

|      |  |                     |
|------|--|---------------------|
| 15.1 | <b>Safety, health and environmental regulations/legislation specific for the substance or mixture.</b> |                     |
|      | Seveso Category  | None                |
|      | Restrictions on the product or substances contained under Annex 17 Regulation (EC) 1907/2006           | Product:<br>Point 3 |
|      | Substances in Candidate List (Art. 59 REACH)   | None                |
|      | Substances subject to authorization (Exhibit XIV REACH)  | None                |
|      | Substances subject to export notification duty Reg. (CE) 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.   |
| Ingredients in accordance with Regulation CE N.648/2004 | Non-ionic and cationic surfactants (<5%) ; Perfumes (5%-15%);<br><u>Perfumes:</u><br>Benzyl Salicylate, Hexyl Cinnamal, Coumarin, Alpha Isomethyl Ionone, Citronellol, Limonene, Eugenol, Linalool.<br><u>Preservatives:</u><br>Methylchloroisothiazolinone And Methylisothiazolinone (CAS 55965-84-9)<br>The surfactant (s) contained in this preparation is ( are ) in compliance with with the biodegradability criteria established by Regulation ( EC ) Nr . 648/2004 on detergents. |

**15.2 Chemical safety assessment**

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

**SECTION 16. Other information**

|  |  |
|--|--|
| <u>Text of hazard (H) indications mentioned in section 2-3 of the sheet:</u> |  |
| <b>Acute Tox. 4</b>  | Acute toxicity, category 4   |
| <b>Eye Irrit. 2</b>  | Eye irritation, category 2   |
| <b>Skin Irrit. 2</b>   | Skin irritation, category 2  |
| <b>Skin Sens. 1</b>  | Skin sensitization, category 1                                     |
| <b>Skin Sens. 1A</b>   | Skin sensitization, category 1A                                    |
| <b>Aquatic Chronic 1</b>   | Hazardous to the aquatic environment, chronic toxicity, category 1 |
| <b>Aquatic Chronic 2</b>   | Hazardous to the aquatic environment, chronic toxicity, category 2 |
| <b>Aquatic Chronic 3</b>   | Hazardous to the aquatic environment, chronic toxicity, category 3 |
| <b>H302</b>  | Harmful if swallowed.  |
| <b>H319</b>  | Causes serious eye irritation.                                     |
| <b>H315</b>  | Causes skin irritation.  |
| <b>H317</b>  | May cause an allergic skin reaction.                               |
| <b>H410</b>  | Very toxic to aquatic life with long lasting effects.              |
| <b>H411</b>  | Toxic to aquatic life with long lasting effects.                   |
| <b>H412</b>  | Harmful 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 labelling 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
10. The Merck Index. - 10th Edition
11. Handling Chemical Safety
12. INRS - Fiche Toxicologique (toxicological sheet)
13. Patty - Industrial Hygiene and Toxicology
14. N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
15. 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: All sections