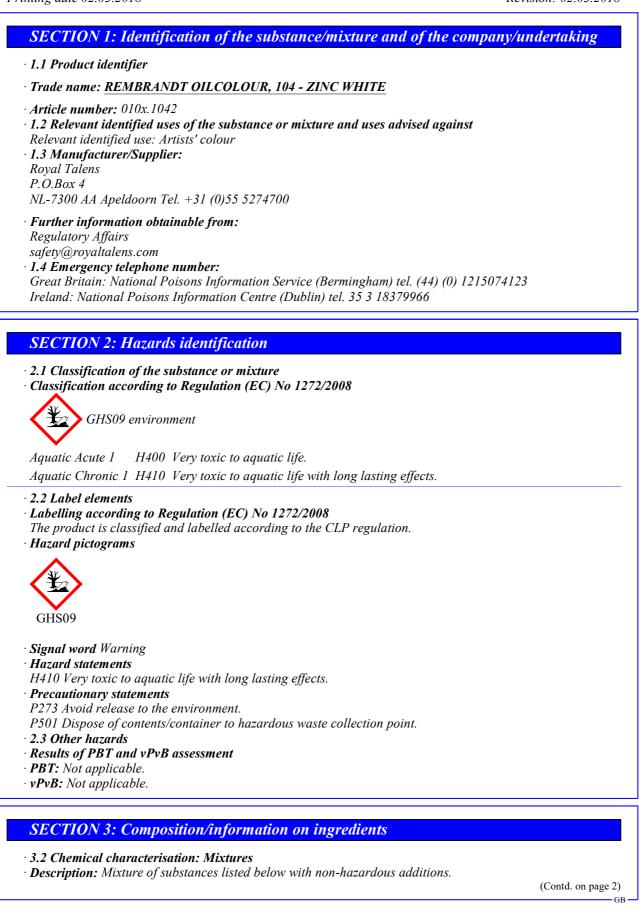


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| | | (Contd. of page 1) |
|-----------------------------------|---|--------------------|
| · Dangerous components: | | |
| CAS: 1314-13-2 | zinc oxide | 50-70% |
| EINECS: 215-222-5 | Aquatic Acute 1, H400; Aquatic Chronic 1, H410 | |
| Reg.nr.: 01-2119463881-32-xxxx | | |
| • Additional information: For the | wording of the listed hazard phrases refer to section 16. | |

SECTION 4: First aid measures

• 4.1 Description of first aid measures

• *After inhalation:* Not applicable.

- *After skin contact: Generally the product does not irritate the skin.*
- *After eye contact: Rinse opened eye for several minutes under running water.*
- · After swallowing: If symptoms persist consult doctor.
- 4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.
- 4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures

· 5.1 Extinguishing media

- Suitable extinguishing agents: CO2, sand, extinguishing powder. Do not use water.
- \cdot 5.2 Special hazards arising from the substance or mixture
- Formation of toxic gases/vapours is possible during heating or in case of fire.
- 5.3 Advice for firefighters
- · Protective equipment: No special measures required.

SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures Not required.
- · 6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- · 6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

- 6.4 Reference to other sections
- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

- 7.1 Precautions for safe handling No special precautions are necessary if used correctly.
- Information about fire and explosion protection: No special measures required.
- · 7.2 Conditions for safe storage, including any incompatibilities
- · Storage:
- Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- · Storage class: -
- 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

- · 8.1 Control parameters
- · Ingredients with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

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Safety data sheet according to 1907/2006/EC, Article 31

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|---|---|--------------------------------|------------------------------|
| DNELS | | | |
| 1314-13-2 | zinc oxide | | |
| Oral | DNEL, long term (chronic) - systemic effects | | 0.83 mg/kg bw/day (Consumer) |
| Dermal | DNEL, long term (chronic) - systemic effects | | 83 mg/kg bw/day (Consumer) |
| | | | 83 mg/kg bw/day (Employee) |
| Inhalative | e DNEL,long term (chronic) - systemic effects | | 2.5 mg/m3 (Consumer) |
| | | | 5 mg/m3 (Employee) |
| PNECs | | | |
| 1314-13-2 | zinc oxide | | |
| PNEC, fresh water | | 0.0206 mg/l (aquatic organism) | |
| PNEC,marine water | | 0.0061 mg/l (aquatic organism) | |
| PNEC, fresh water sediment | | 117.8 mg/kg (aquatic organism) | |
| PNEC,marine water sediment | | 56.5 mg/kg (aquatic organism) | |
| PNEC,soil 3 | | 35.6 mg/kg (aquatic organism) | |
| PNEC, sewage treatment plant 0.1 mg/l (aqua | | 0.1 mg/l (aquatic organi | ism) |

· 8.2 Exposure controls

• Personal protective equipment:

• General protective and hygienic measures: Wash hands before breaks and at the end of work.

• **Respiratory protection:** Not required.

· Protection of hands:

• Material of gloves Not applicable.

· Penetration time of glove material Not applicable.

• Eye protection: Not required.

| 9.1 Information on basic physical and ch | nemical properties | |
|--|---|--|
| General Information | | |
| Appearance: | | |
| Form: | Pasty | |
| Colour: | White | |
| Odour: | Characteristic | |
| Odour threshold: | Not determined. | |
| pH-value: | Not applicable. | |
| Change in condition | | |
| Melting point/freezing point: | Undetermined. | |
| Initial boiling point and boiling range: | Undetermined. | |
| Flash point: | >100 °C | |
| Flammability (solid, gas): | Not applicable. | |
| Decomposition temperature: | Not determined. | |
| Explosive properties: | Product does not present an explosion hazard. | |
| Explosion limits: | | |
| Lower: | Not determined. | |
| Upper: | Not determined. | |
| Oxidising properties | No further relevant information available. | |
| Vapour pressure: | Not determined. | |
| Density at 20 °C: | 2.25 g/cm ³ | |
| Vapour density | Not applicable. | |
| Evaporation rate | Not applicable. | |

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|---|--|----------|
| • Solubility in / Miscibility with water: | Not miscible or difficult to mix. | |
| · Partition coefficient: n-octanol/water: | Not determined. | |
| · Viscosity: | | |
| Dynamic: | Not applicable. | |
| Kinematic: | Not applicable. | |
| • 9.2 Other information | No further relevant information available. | |

SECTION 10: Stability and reactivity

- 10.1 Reactivity Dangerous reactions are not expected if the product is handled according to its intended use.
- 10.2 Chemical stability Stable under recommended storage and handling conditions (see section 7).
- · 10.3 Possibility of hazardous reactions
- Dangerous reactions are not expected if the product is handled according to its intended use.
- 10.4 Conditions to avoid No further relevant information available.
- 10.5 Incompatible materials:

Acids; Alkali (lyes) Strong oxidising agents.

• 10.6 Hazardous decomposition products: No decomposition if used according to specifications.

SECTION 11: Toxicological information

· 11.1 Information on toxicological effects

• Acute toxicity Based on available data, the classification criteria are not met.

· LD/LC50 values relevant for classification:

1314-13-2 zinc oxide

Oral LD50 >5,000 mg/kg (rat)

Primary irritant effect:

• Skin corrosion/irritation Based on available data, the classification criteria are not met.

- Serious eye damage/irritation Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

• CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)

- · Germ cell mutagenicity Based on available data, the classification criteria are not met.
- · Carcinogenicity Based on available data, the classification criteria are not met.
- *Reproductive toxicity Based on available data, the classification criteria are not met.*
- STOT-single exposure Based on available data, the classification criteria are not met.
- STOT-repeated exposure Based on available data, the classification criteria are not met.

• Aspiration hazard Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

| · 12.1 | Toxicity |
|--------|----------|
|--------|----------|

| 1314-13-2 zinc | oxide | |
|--------------------|---|-------------------|
| EC50, acute | 0.137 mg/l (algae) | |
| | 0.137 mg/l (algae) 0.413 mg/l (daphnia) | |
| | | |
| | 19 μg/l (algae) 82 μg/l (daphnia) | |
| · 12.2 Persistence | e and degradability No further relevant information available. | |
| · 12.3 Bioaccum | <i>llative potential</i> No further relevant information available. | |
| · 12.4 Mobility in | soil No further relevant information available. | |
| - | | (Contd. on page 5 |

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• Additional ecological information:

· General notes:

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water Do not allow product to reach ground water, water course or sewage system. Danger to drinking water if even small quantities leak into the ground. Also poisonous for fish and plankton in water bodies. Very toxic for aquatic organisms

· 12.5 Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

• 12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

• 13.1 Waste treatment methods

· Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

• Uncleaned packaging:

· Recommendation: Disposal must be made according to official regulations.

| 14.1 UN-Number | |
|---|--|
| ADR, IMDG, IATA | UN3082 |
| 14.2 UN proper shipping name | |
| ADR | 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE |
| | LIQUID, N.O.S. (zinc oxide) |
| IMDG | ENVIRONMENTALLY HAZARDOUS SUBSTANCE LIQUID, N.O.S. (zinc oxide), MARINE POLLUTANT |
| IATA | ENVIRONMENTALLY HAZARDOUS SUBSTANCE |
| | LIQUID, N.O.S. (zinc oxide) |
| 14.3 Transport hazard class(es) | |
| ADR, IMDG, IATA | |
| | |
| Class Label | 9 Miscellaneous dangerous substances and articles. 9 |
| 14.4 Packing group | |
| ADR, IMDĞ, IATA | III |
| 14.5 Environmental hazards: | Product contains environmentally hazardous substances zinc oxide |
| Marine pollutant: | Symbol (fish and tree) |
| Special marking (ADR): | Symbol (fish and tree) |
| Special marking (IATA): | Symbol (fish and tree) |
| 14.6 Special precautions for user | Warning: Miscellaneous dangerous substances an articles. |
| Danger code (Kemler): | 90 |
| EMS Number: | F-A,S-F |
| Stowage Category | A |
| 14.7 Transport in bulk according to Ann | |
| Marpol and the IBC Code | Not applicable. |

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| • Transport/Additional information: | |
| ·ADR | |
| · Limited quantities (LQ) | 5L |
| • Excepted quantities (EQ) | Code: El |
| | Maximum net quantity per inner packaging: 30 ml |
| | Maximum net quantity per outer packaging: 1000 ml |
| · Transport category | 3 |
| • Tunnel restriction code | E |
| ·IMDG | |
| · Limited quantities (LQ) | 5L |
| \cdot Excepted quantities ($\widetilde{E}Q$) | Code: El |
| | Maximum net quantity per inner packaging: 30 ml |
| | Maximum net quantity per outer packaging: 1000 ml |
| · UN "Model Regulation": | UN 3082 ENVIRONMENTALLY HAZARDOU |
| | SUBSTANCE, LIQUID, N.O.S. (ZINC OXIDE), 9, III |

SECTION 15: Regulatory information

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

- · Directive 2012/18/EU
- · Named dangerous substances ANNEX I None of the ingredients is listed.
- · Seveso category E1 Hazardous to the Aquatic Environment
- \cdot Qualifying quantity (tonnes) for the application of lower-tier requirements 100 t
- \cdot Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t
- REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3
- 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Relevant phrases

H400 Very toxic to aquatic life. H410 Very toxic to aquatic life with long lasting effects. • Abbreviations and acronyms: ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods IATA: International Air Transport Association GHS: Globally Harmonised System of Classification and Labelling of Chemicals EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) DNEL: Derived No-Effect Level (REACH) PNEC: Predicted No-Effect Concentration (REACH) LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1 Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1