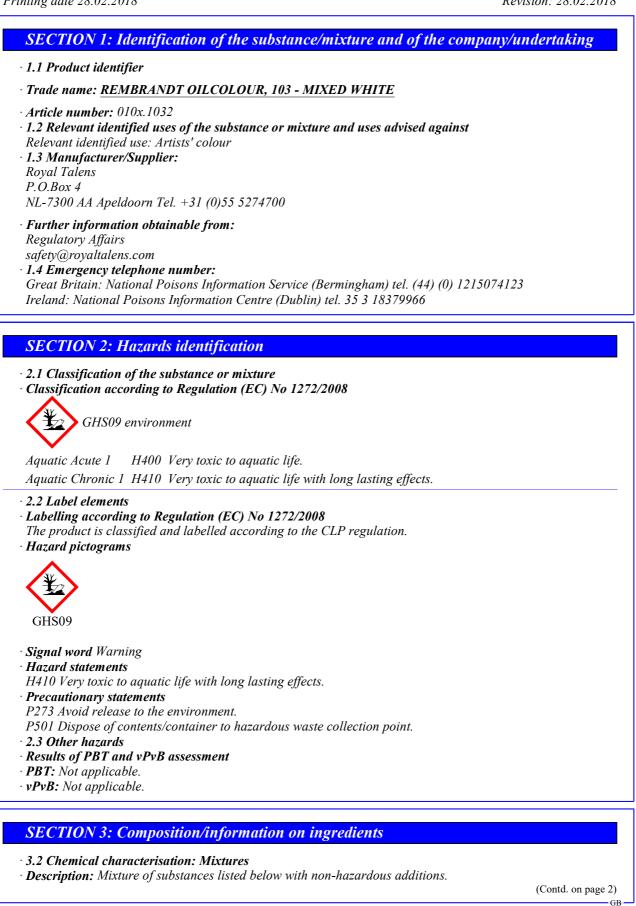
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Safety data sheet according to 1907/2006/EC, Article 31 Page 1/6

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· Dangerous components:		
CAS: 1314-13-2	zinc oxide	25-50%
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.	I

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.
- · 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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			(Contd. of page
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 effect		83 mg/kg bw/day (Consumer)
			83 mg/kg bw/day (Employee)
Inhalative	DNEL,long term (c.	hronic) - 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		35.6 mg/kg (aquatic organism)	
PNEC,sew	age treatment plant	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.

SECTION 9: Physical and chemical 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.	· >200 °C	
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:	2.2 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	
-----------------	--

· Aquatic toxicity:		
1314-13-2 zinc		
EC50, acute	0.137 mg/l (algae)	
	0.137 mg/l (algae) 0.413 mg/l (daphnia)	
NOEC, chronic	19 μg/l (algae)	
	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.	
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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	9 Miscellaneous dangerous substances and articles.
· Label	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 and
	articles.
Danger code (Kemler):	90
EMS Number:	F-A,S-F
Stowage Category	A
14.7 Transport in bulk according to Ann	ex II of
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

Herorum privates
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
DDT: Derived No-effect Develow and Toxic

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