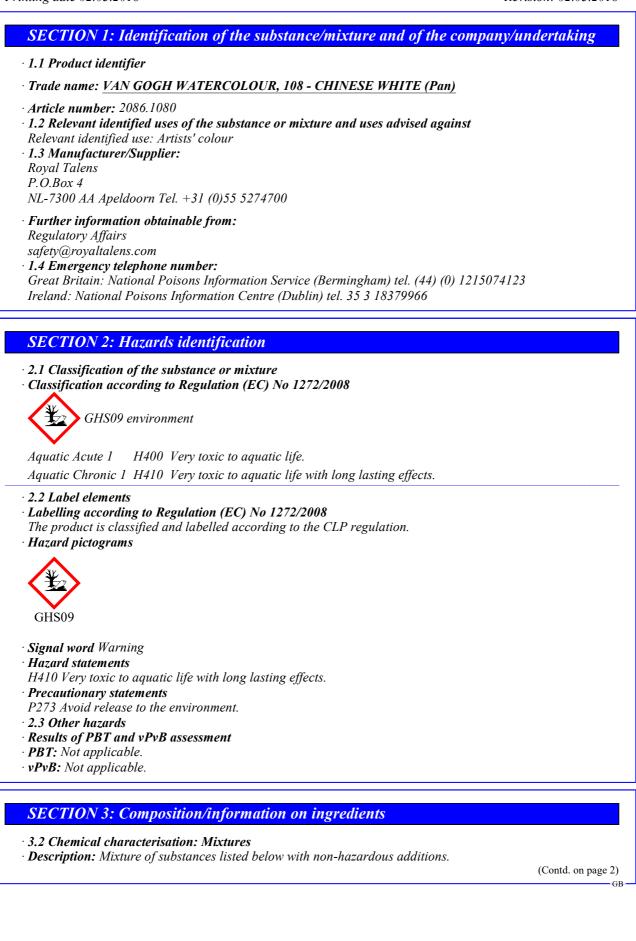
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Safety data sheet according to 1907/2006/EC, Article 31 Page 1/6

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

SECTION 4: First aid measures

• 4.1 Description of first aid measures

- · General information: No special measures required.
- · 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: Not relevant
- 5.2 Special hazards arising from the substance or mixture No further relevant information available.
- 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: Pick up mechanically.
- · 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: Not required.

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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 (c.	hronic) - systemic effects	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, sewage treatment plant 0		0.1 mg/l (aquatic organism)	

· 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:

· Density at 20 °C: · Vapour density

· Evaporation rate

• Material of gloves Not applicable.

· Penetration time of glove material Not applicable.

• Eye protection: Not required.

SECTION 9: Physical and chemical properties •9.1 Information on basic physical and chemical properties · General Information · Appearance: Solid Form: Colour: White · Odour: Characteristic · Odour threshold: Not determined. 5.5 · pH-value at 20 °C: · Change in condition *Melting point/freezing point:* Undetermined. Initial boiling point and boiling range: Undetermined. · Flash point: Not applicable. · Flammability (solid, gas): Not determined. · 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. Not applicable. · Vapour pressure:

5.61 g/cm³

Not applicable. Not applicable.

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Insoluble.	
Not determined.	
Not applicable.	
Not applicable.	
No further relevant information available.	
	Insoluble. Not determined. Not applicable. Not applicable.

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)

• 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.

 \cdot 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 oxide

EC50, acute 0.137 mg/l (algae) 0.413 mg/l (daphnia)

NOEC, chronic 19 $\mu g/l$ (algae)

82 μg/l (daphnia)

• 12.2 Persistence and degradability No further relevant information available.

• 12.3 Bioaccumulative potential No further relevant information available.

• 12.4 Mobility in soil No further relevant information available.

 \cdot Additional ecological information:

· General notes:

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water

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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
14774	LIQUID, N.O.S. (zinc oxide), MARINE POLLUTANT ENVIRONMENTALLY HAZARDOUS SUBSTANCE
IATA	LIQUID, N.O.S. (zinc oxide)
14.3 Transport hazard class(es)	
ADR, IMDG, IATA	
Class	9 Miscellaneous dangerous substances and articles.
Label	9 Miscenaneous aangerous substances and articles. 9
14.4 Packing group	
ADR, IMDĞ, IATA	111
14.5 Environmental hazards:	Product contains environmentally hazardous substances
	zinc oxide
Marine pollutant:	Symbol (fish and tree)
Special marking (ADR): Special marking (IATA):	Symbol (fish and tree) 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
14.7 Iransport in butk according to Ann	

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• Transport/Additional information:	
·ADR	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1
	Maximum net quantity per inner packaging: 30 g
	Maximum net quantity per outer packaging: 1000 g
· Transport category	3
· Tunnel restriction code	E
·IMDG	
· Limited quantities (LQ)	5L
\cdot Excepted quantities (\widetilde{EQ})	Code: El
	Maximum net quantity per inner packaging: 30 g
	Maximum net quantity per outer packaging: 1000 g
· 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
- Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t
- · 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