

NANOBYK-3822

Version 1.2
SDS_AU

Revision Date: 15.04.2026

Date of last issue: 17.12.2024
Print Date 22.04.2026**SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : NANOBYK-3822
Product code : 000000000000133023

Manufacturer or supplier's details

Company : BYK-Chemie GmbH
Address : Abelstrasse 45
46483 Wesel
Telephone : +49 281 670-23532
Telefax : +49 281 670-23533
E-mail address : GHS.BYK@altana.com
Emergency telephone number : 18000 74234 (toll –free number, access from Australia only)
+61 2 8014 4558

Importer

Company : Alchemy Agencies Pty Ltd
Level 15, 28 Freshwater Place
Southbank, Victoria, Australia 3006
Tel: +61 3 9116 6359

Use of the Sub-
stance/Mixture : Additive for absorption of UV light

SECTION 2. HAZARDS IDENTIFICATION**GHS Classification**

Short-term (acute) aquatic hazard : Category 1

Long-term (chronic) aquatic hazard : Category 1

GHS label elements

Hazard pictograms :



Signal word : Warning

Hazard statements : H410 Very toxic to aquatic life with long lasting effects.

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Precautionary statements : **Prevention:**
P273 Avoid release to the environment.

Response:
P391 Collect spillage.

Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards which do not result in classification

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture
Chemical nature : Dispersion of zinc oxide nanoparticles

Components

Chemical name	CAS-No.	Concentration (% w/w)
zinc oxide	1314-13-2	>= 30 -< 50

SECTION 4. FIRST AID MEASURES

General advice : Do not leave the victim unattended.

If inhaled : If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.

In case of eye contact : Flush eyes with water as a precaution.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

If swallowed : Keep respiratory tract clear.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.

Most important symptoms and effects, both acute and delayed : No information available.

Notes to physician : No information available.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Foam
Carbon dioxide (CO₂)
Dry chemical

Unsuitable extinguishing media : High volume water jet

Specific hazards during fire-fighting : Do not allow run-off from fire fighting to enter drains or water courses.

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Hazardous combustion products	: Carbon oxides Nitrogen oxides (NOx) Sulphur oxides
Specific extinguishing methods	: Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Special protective equipment for firefighters	: Wear self-contained breathing apparatus for firefighting if necessary.
Hazchem Code	: •3Z

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	: Use personal protective equipment.
Environmental precautions	: Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	: Wipe up with absorbent material (e.g. cloth, fleece). Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	: Normal measures for preventive fire protection.
Advice on safe handling	: For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Dispose of rinse water in accordance with local and national regulations.
Hygiene measures	: Wash hands before breaks and at the end of workday.
Conditions for safe storage	: Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Electrical installations / working materials must comply with the technological safety standards.
Materials to avoid	: No special restrictions on storage with other products.
Further information on storage stability	: No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Components with workplace control parameters**

Components	CAS-No.	Value type (Form of	Control parameters / Permissible	Basis
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		exposure)	concentration	
zinc oxide	1314-13-2	TWA (Dust)	10 mg/m ³	AU OEL
		TWA (Fumes)	5 mg/m ³	AU OEL
		STEL (Fumes)	10 mg/m ³	AU OEL
		TWA (Respirable particulate matter)	2 mg/m ³	ACGIH
		STEL (Respirable particulate matter)	10 mg/m ³	ACGIH

Personal protective equipment

Hand protection

Material : Nitrile rubber
Break through time : > 480 min

Remarks : Wear suitable gloves.
Eye protection : Eye wash bottle with pure water
Tightly fitting safety goggles
Skin and body protection : Impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : dispersion

Colour : white

Odour : mild

Odour Threshold : No data available

pH : 9.5
Concentration: 100 %
Method: DIN 19268 (100%ig)

Melting point/ range : ca. 0 °C
(1,013 hPa)
Method: derived

Initial boiling point : ca. 100 °C
(1,013 hPa)
Method: derived

Flash point : does not flash

Evaporation rate : No data available

Flammability (liquids) : Does not sustain combustion.

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Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	< 28 hPa (20 °C) Method: derived
Relative vapour density	:	No data available
Relative density	:	No data available
Density	:	1.493 g/cm ³ (20 °C, 1,013 hPa) Method: 4 (20°C oscillating U-tube)
Bulk density	:	Not applicable
Solubility(ies)		
Water solubility	:	completely miscible
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Auto-ignition temperature	:	Not combustible.
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	6 mPa.s (20 °C) Method: P/K 20°C
Viscosity, kinematic	:	No data available
Surface tension	:	48.4 mN/m

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No decomposition if stored and applied as directed.
Chemical stability	:	No decomposition if stored and applied as directed.
Possibility of hazardous reactions	:	No decomposition if stored and applied as directed.
Conditions to avoid	:	No data available
Incompatible materials	:	No data available
Hazardous decomposition products	:	No decomposition if stored and applied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION**Acute toxicity**

Not classified due to lack of data.

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Product:

Acute oral toxicity : Remarks: No data available

Skin corrosion/irritation

Not classified due to lack of data.

Product:

Remarks : No data available

Serious eye damage/eye irritation

Not classified due to lack of data.

Product:

Remarks : No data available

Respiratory or skin sensitisation

Skin sensitisation

Not classified due to lack of data.

Respiratory sensitisation

Not classified due to lack of data.

Product:

Remarks : No data available

Chronic toxicity

Germ cell mutagenicity

Not classified due to lack of data.

Product:

Genotoxicity in vitro : Remarks: No data available

Genotoxicity in vivo : Result: No data available

Carcinogenicity

Not classified due to lack of data.

Product:

Remarks : No data available

Reproductive toxicity

Not classified due to lack of data.

Product:

Effects on fertility : Remarks: No data available

Effects on foetal development : Remarks: No data available

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STOT - single exposure

Not classified due to lack of data.

Product:

Remarks : No data available

STOT - repeated exposure

Not classified due to lack of data.

Product:

Remarks : No data available

Repeated dose toxicity

Product:

Remarks : No data available

Aspiration toxicity

Not classified due to lack of data.

Product:

No data available

Further information

Product:

Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish :
Remarks: No data available

Toxicity to daphnia and other :
aquatic invertebrates Remarks: No data available

Components:

zinc oxide:

M-Factor (Acute aquatic tox- : 1
icity)
M-Factor (Chronic aquatic : 1
toxicity)

Persistence and degradability

Product:

Biodegradability : Remarks: No data available

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Bioaccumulation : Remarks: No data available

Mobility in soil

No data available

Other adverse effects**Product:**Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Very toxic to aquatic life with long lasting effects.**SECTION 13. DISPOSAL CONSIDERATIONS****Disposal methods**Waste from residues : The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.
Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.**SECTION 14. TRANSPORT INFORMATION****International Regulations****UNRTDG**UN number : UN 3082
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Zinc oxide)
Class : 9
Packing group : III
Labels : 9**IATA-DGR**UN/ID No. : UN 3082
Proper shipping name : Environmentally hazardous substance, liquid, n.o.s.
(Zinc oxide)
Class : 9
Packing group : III
Labels : Miscellaneous Dangerous Goods
Packing instruction (cargo aircraft) : 964
Packing instruction (passenger aircraft) : 964

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UN number : UN 3082
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S.
(Zinc oxide)
Class : 9
Packing group : III
Labels : 9
EmS Code : F-A, S-F
Marine pollutant : yes
Remarks : IMDG Code segregation group - none

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations**ADG**

UN number : UN 3082
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S.
(Zinc oxide)
Class : 9
Packing group : III
Labels : 9
Hazchem Code : •3Z

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

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

SECTION 16. OTHER INFORMATION

Revision Date : 15.04.2026
Date format : dd.mm.yyyy

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
AU OEL : Australia. Workplace Exposure Standards for Airborne Contaminants.

ACGIH / TWA : 8-hour, time-weighted average
ACGIH / STEL : Short-term exposure limit
AU OEL / TWA : Exposure standard - time weighted average
AU OEL / STEL : Exposure standard - short term exposure limit

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AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonised System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organisation; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardisation; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MERCOSUR - The Agreement for the Facilitation of the Transport of Dangerous Goods; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organisation for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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