



SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

ZINC OXIDE

Version 4.0

Print Date 2011/11/23

Revision Date 2011/11/23

MSDS code: MZOX001

1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name : ZINC OXIDE
Substance name : zinc oxide
Index-No. : 030-013-00-7
CAS-No. : 1314-13-2
EC-No. : 215-222-5
Registration number : 01-2119463881-32-xxxx

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the Substance/Mixture : At this time we do not yet have information on identified uses. They will be included in this safety data sheet when available.

Uses advised against : At this moment we have not identified any uses advised against

1.3. Details of the supplier of the safety data sheet

The Soap Kitchen
Unit 8 Caddsdwn Industrial Park, Clovelly Road, Bideford,
Devon EX39 3DX
Tel: 01237 420872 (+44 (0)1237 420872)
Email: it@thesoapkitchen.co.uk

2. Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

REGULATION (EC) No 1272/2008			
Hazard class	Hazard category	Target Organs	Hazard statements
Acute aquatic toxicity	Category 1	---	H400
Chronic aquatic toxicity	Category 1	---	H410

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Hazardous components which must be listed on the label:

- zinc oxide

2.3. Other hazards

For Results of PBT and vPvB assessment see section 12.5.

3. Composition/information on ingredients

3.1. Substances

Hazardous components	Amount [%]	Classification (REGULATION (EC) No 1272/2008)		Classification (67/548/EEC)
		Hazard class / Hazard category	Hazard statements	
zinc oxide				
Index-No. : 030-013-00-7		Aquatic Acute1	H400	N; R50-R53
CAS-No. : 1314-13-2		Aquatic Chronic1	H410	
EC-No. : 215-222-5	<= 100			
Registration : 01-2119463881-32-xxxx				

For the full text of the R-phrases mentioned in this Section, see Section 16.

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. First aid measures

4.1. Description of first aid measures

- General advice : No special precautions required.
- If inhaled : Remove to fresh air. If symptoms call a physician.
- In case of skin contact : Wash off with plenty of water. If skin irritation persists, call a physician.
- In case of eye contact : Rinse thoroughly with plenty of water, also under the eyelids. If symptoms persist, call a physician.
- If swallowed : Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.

4.2. Most important symptoms and effects, both acute and delayed

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Symptoms : See Section 11 for more detailed information on health effects and symptoms.

Effects : See Section 11 for more detailed information on health effects and symptoms.

4.3. Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.No further information available.

5. Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : The product itself does not burn. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media : No information available.

5.2. Special hazards arising from the substance or mixture

Specific hazards during firefighting : Incomplete combustion may form toxic pyrolysis products.

5.3. Advice for firefighters

Special protective equipment for firefighters : Wear appropriate body protection (full protective suit)In the event of fire, wear self-contained breathing apparatus.

Further information : 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.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions : Wear personal protective equipment. Ensure adequate ventilation. Avoid dust formation. Avoid contact with the skin and the eyes. Do not breathe dust.

6.2. Environmental precautions

Environmental precautions : Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration. If the product contaminates rivers and lakes or drains inform respective authorities.

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6.3. Methods and materials for containment and cleaning up

Methods and materials for containment and cleaning up : Use mechanical handling equipment. Keep in suitable, closed containers for disposal.

Further information : Treat recovered material as described in the section "Disposal considerations".

6.4. Reference to other sections

See Section 1 for emergency contact information.
See Section 8 for information on personal protective equipment.
See Section 13 for waste treatment information.

7. Handling and storage

7.1. Precautions for safe handling

Advice on safe handling : Use personal protective equipment. Avoid dust formation. Provide for appropriate exhaust ventilation and dust collection at machinery. Avoid contact with the skin and the eyes. Do not breathe dust.

Hygiene measures : Keep away from food, drink and animal feedingstuffs. Smoking, eating and drinking should be prohibited in the application area. Wash hands before breaks and at the end of workday. Avoid contact with skin and eyes. Do not breathe dust.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Store in original container.

Advice on protection against fire and explosion : The product is not flammable. Normal measures for preventive fire protection.

Further information on storage conditions : Keep container tightly closed. Keep in a dry place. Keep in a well-ventilated place.

Advice on common storage : Keep away from food, drink and animal feedingstuffs.

7.3. Specific end uses

Specific use(s) : No information available.

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8. Exposure controls/personal protection

8.1. Control parameters

Other Occupational Exposure Limit Values

(Additional) : Contains no substances with occupational exposure limit values.
Information

Component: zinc oxide

**CAS-No.
1314-13-2**

Derived No Effect Level (DNEL)

Workers, Long-term - systemic effects, Skin contact	: 83 mg/kg bw/day
Workers, Long-term - systemic effects, Inhalation	: 5 mg/m ³
Consumers, Long-term - systemic effects, Skin contact	: 83 mg/kg bw/day
Consumers, Long-term - systemic effects, Inhalation	: 2.5 mg/m ³
Consumers, Long-term - systemic effects, Ingestion	: 0.83 mg/kg bw/day

Predicted No Effect Concentration (PNEC)

Fresh water	: 20.6 µg/l
Marine water	: 6.1 µg/l
Sewage treatment plant (STP)	: 52 µg/l
Sediment (Fresh water) Related to, dry weight	: 117.8 mg/kg
Sediment (Marine water) Related to, dry weight	: 56.5 mg/kg
Soil Related to, dry weight	: 35.6 mg/kg

8.2. Exposure controls

Engineering measures

Refer to protective measures listed in sections 7 and 8.

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Personal protective equipment

Respiratory protection

Advice : Required if dust is released
Recommended Filter type:
Particle filter:P2
Particle filter:P3

Hand protection

Advice : Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.
Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).
Protective gloves should be replaced at first signs of wear.

Material : Nitrile rubber
Break through time : ≥ 8 h
Glove thickness : ≥ 0.11 mm

Eye protection

Advice : Tightly fitting safety goggles

Skin and body protection

Advice : Protective work clothing

Environmental exposure controls

General advice : Do not flush into surface water or sanitary sewer system.
Avoid subsoil penetration.
If the product contaminates rivers and lakes or drains inform respective authorities.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Form : solid
Colour : white
to
yellowish

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Odour	: odourless
Odour Threshold	: no data available
pH	: ca. 7 (50 g/l) slurry
Melting point/range	: 1,975 °C
Boiling point/boiling range	: Decomposes before boiling
Flash point	: not applicable
Evaporation rate	: not applicable
Flammability (solid, gas)	: not auto-flammable
Upper explosion limit	: not applicable
Lower explosion limit	: not applicable
Vapour pressure	: not applicable
Relative vapour density	: not applicable
Density	: ca. 5.5 - 5.7 g/cm ³ (20 °C)
Water solubility	: < 2 mg/l (20 °C) practically insoluble
Partition coefficient: n-octanol/water	: not applicable
Ignition temperature	: not applicable
Thermal decomposition	: no data available
Viscosity, kinematic	: not applicable
Explosivity	: Product is not explosive.
Oxidizing properties	: none

9.2. Other information

Molecular Weight	: 81.38 g/mol
Bulk density	: ca. 600 kg/m ³

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10. Stability and reactivity

10.1. Reactivity

Advice : Stable under recommended storage conditions.

10.2. Chemical stability

Advice : No decomposition if stored and applied as directed.

10.3. Possibility of hazardous reactions

Hazardous reactions : Risk of explosion with: Magnesium

10.4. Conditions to avoid

Thermal decomposition : no data available

10.5. Incompatible materials

Materials to avoid : Materials to avoid: Hydrogen peroxide, Magnesium powder, Acids and bases

10.6. Hazardous decomposition products

Hazardous decomposition products : Zinc oxide fumes.

11. Toxicological information

11.1. Information on toxicological effects

Component: zinc oxide		CAS-No. 1314-13-2
Acute toxicity		
Oral		
LD50	:	> 5000 mg/kg (rat)
Inhalation		
LC50	:	> 5.7 mg/l (rat; 4 h; dust/mist)

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Irritation

Skin

Result : No skin irritation (rabbit)

Eyes

Result : Mild eye irritation (rabbit)

Sensitisation

Result : not sensitizing (guinea pig)

Result : Patch test on human volunteers did not demonstrate sensitization properties.

12. Ecological information

12.1. Toxicity

Component: zinc oxide

**CAS-No.
1314-13-2**

Acute toxicity

Fish

LC50 : 1.31 mg/l (Oncorhynchus mykiss; 96 h)
Data based on test results or data from a comparable product.

Toxicity to daphnia and other aquatic invertebrates.

EC50 : 0.12 mg/l (Daphnia magna; 48 h)
Data based on test results or data from a comparable product.

algae

EC50 : 0.21 mg/l (Pseudokirchneriella subcapitata; 72 h)

NOEC : 0.04 mg/l (Pseudokirchneriella subcapitata)

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12.2. Persistence and degradability

Component: zinc oxide

CAS-No.

1314-13-2

Persistence and degradability

Biodegradability

Result : The methods for determining the biological degradability are not applicable to inorganic substances.

12.3. Bioaccumulative potential

Bioaccumulation

Result : no data available

12.4. Mobility in soil

Mobility

Result : no data available

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment

Result : no data available

12.6. Other adverse effects

Additional ecological information

Result : Do not flush into surface water or sanitary sewer system.
Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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13. Disposal considerations

13.1. Waste treatment methods

- Product : Disposal together with normal waste is not allowed. Special disposal required according to local regulations. Do not let product enter drains. Contact waste disposal services.
- Contaminated packaging : Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning. Packagings that cannot be cleaned are to be disposed of in the same manner as the product.
- European Waste Catalogue Number : No waste code according to the European Waste Catalogue can be assigned for this product, as the intended use dictates the assignment. The waste code is established in consultation with the regional waste disposer.

14. Transport information

14.1. UN number

3077

14.2. UN proper shipping name

- ADR : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(zinc oxide)
- RID : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(zinc oxide)
- IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(zinc oxide)

14.3. Transport hazard class(es)

- ADR-Class : 9
(Labels; Classification Code; Hazard identification No; Tunnel restriction code) 9; M7; 90; (E)
- RID-Class : 9
(Labels; Classification Code; Hazard identification No) 9; M7; 90
- IMDG-Class : 9
(Labels; EmS) 9; F-A, S-F

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14.4. Packaging group

ADR : III
RID : III
IMDG : III

14.5. Environmental hazards

Labeling according to 5.2.1.8 ADR : Fish and tree
Labeling according to 5.2.1.8 RID : Fish and tree
Labeling according to 5.2.1.6.3 IMDG : Fish and tree
Classification as environmentally hazardous according to 2.9.3 IMDG : yes

14.6. Special precautions for user

Not applicable.

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

IMDG : Not applicable.

15. Regulatory information

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

UK ISR : zinc oxide: Annual reporting level threshold: 100 kg
UK ISR : zinc oxide: Annual reporting level threshold: 100; kg
Other regulations : Occupational restrictions: Take note of Dir 92/85/EEC on the safety and health of pregnant workers at work and of Dir 94/33/EC on the protection of young people at work.

Notification status

zinc oxide:

Regulatory List	Notification	Notification number
AICS	YES	
DSL	YES	
INV (CN)	YES	
ENCS (JP)	YES	(1)-561
JEX (JP)	YES	(1)-561
ISHL (JP)	YES	(1)-561
TSCA	YES	
EINECS	YES	215-222-5

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KECI (KR)
PICCS (PH)

YES
YES

KE-35565

15.2. Chemical Safety Assessment

Currently we do not have any Information from our supplier about this.

16. Other information

Full text of R-phrases referred to under sections 2 and 3.

R50	Very toxic to aquatic organisms.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R53	May cause long-term adverse effects in the aquatic environment.

Full text of H-Statements referred to under sections 2 and 3.

H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Further information

Other information : The information provided in this Safety Data Sheet is correct to our knowledge at the date of its revision. The information given only describes the products with regard to safety arrangements and is not to be considered as a warranty or quality specification and does not constitute a legal relationship. The information contained in this Safety Data Sheet relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text

|| Indicates updated section.