

1. Product and Company Identification

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Product Name ZIRCONIUM DIOXIDE

Part Number RXSOL-60-6605-883

Company Details:....

RX MARINE INTERNATIONAL
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2. Composition / Information on ingredients

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Substances

Synonyms	Zirconia
Formula	O2Zr
Molecular weight	123,22 g/mol
CAS-No	1314-23-4
EC-No.	215-227-2

No components need to be disclosed according to the applicable regulations.

3. Hazards Identification

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Classification of the substance or mixture	Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.
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Label elements	Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008
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Other hazards	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
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4. First Aid Measures

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Description of first aid measures

If inhaled	After inhalation: fresh air.
In case of skin contact	In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower
In case of eye contact	After eye contact: rinse out with plenty of water. Remove contact lenses.
If swallowed	After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.
Most important symptoms and effects, both acute and delayed	The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

Indication of any immediate medical attention and special treatment needed

No data available

5. Fire-fighting Measures

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Extinguishing media

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

Special hazards arising from the substance or mixture

Highly flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard.

In a fire or if heated, a pressure increase will occur and the container may burst, with the

risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along

the ground. Vapors may accumulate in low or confined areas or travel a considerable

distance to a source of ignition and flash back.

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distance to a source of ignition and flash back.

Zirconium oxides

Not combustible.

Ambient fire may liberate hazardous vapours.

Advice for firefighters	In the event of fire, wear self-contained breathing apparatus.
Further information	None
	spray to keep fire-exposed containers cool.Promptly isolate the scene by removing all persons from the vicinity of the incident if
	there is a fire. No action shall be taken involving any personal risk or without suitable
	training. Move containers from fire area if this can be done without risk. Use water
	spray to keep fire-exposed containers cool.

6. Accidental Release Measures

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Personal precautions, protective equipment and emergency procedures	Advice for non-emergency personnel: Avoid inhalation of dusts. Evacuate the danger area, observe emergency procedures, consult an expert.
Environmental precautions	For personal protection see section 8.
Methods and materials for containment and cleaning up	No special precautionary measures necessary.
	Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.
Reference to other sections	For disposal see section 13.

7. Handling and Storage

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Precautions for safe handling	For precautions see section 2.2.
Conditions for safe storage, including any incompatibilities	Recommended storage temperature see product label.Tightly closed.
	Recommended storage temperature see product label.
Storage conditions	Tightly closed. Dry.
Storage class	Storage class (TRGS 510): 13: Non Combustible Solids.
Specific end use(s)	Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. Exposure controls and personal protection

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Control parameters	
Ingredients with workplace control parameters	
Exposure controls	
Personal protective equipment	
Eye/face protection	Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses
Skin protection	This recommendation applies only to the product stated in the safety data

sheet,

supplied by us and for the designated use. When dissolving in or mixing with other

substances and under conditions deviating from those stated in EN374 please

contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell,

Internet: www.kcl.de).

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 480 min

Material tested:KCL 741 Dermatril® L

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substances and under conditions deviating from those stated in EN374 please

contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell,

Internet: www.kcl.de).

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 480 min

Material tested:KCL 741 Dermatril® L

Required when dusts are generated.

Our recommendations on filtering respiratory protection are based on the following

standards: DIN EN 143, DIN 14387 and other accompanying standards relating to

the used respiratory protection system.

Recommended Filter type: Filter type P1

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory

protective devices are carried out according to the instructions of the producer.

Respiratory protection

Control of environmental exposure

These measures have to be properly documented.

Do not let product enter drains..

9. Physical and chemical properties

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Information on basic physical and chemical properties

Physical state	Powder
Color	White
Odor	No data available
Melting point/freezing point	Melting point/range: 2.700 °C - lit.
Initial boiling point and boiling range	5.000 °C - lit.
Flammability (solid, gas)	The product is not flammable.
Upper/lower flammability or explosive limits	No data available
Flash point	Not applicable
Autoignition temperature	360 °C
Decomposition temperature	No data available
	materials. Extremely flammable in the presence of the following materials or conditions: oxidizing
	materials.
pH	No data available
Viscosity	Viscosity, kinematic: No data available
	Viscosity, dynamic: No data available
Water solubility	0,00006 g/l at 20 °C - OECD Test Guideline 105
Partition coefficient: n-octanol/water	No data available
Vapor pressure	No data available
Density	5,89 g/mL at 25 °C - lit
Relative density	5,77 at 20 °C - OECD Test Guideline 109
Particle characteristics	No data available
Explosive properties	No data available
Oxidizing properties	None
Other safety information	No data available

10. Stability and reactivity

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Reactivity	No data available
Chemical stability	The product is chemically stable under standard ambient conditions (room temperature)
Possibility of hazardous reactions	No data available
Conditions to avoid	No information available
Incompatible materials	Strong acids
Hazardous decomposition products	In the event of fire: see section 5

11. Toxicological information

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Information on toxicological effects

Acute toxicity	Oral: No data available
	LC50 Inhalation - Rat - male and female - 4 h - > 4,3 mg/l - aerosol

(OECD Test Guideline 436)

Dermal: No data available

Skin - Rabbit

Result: No skin irritation

(OECD Test Guideline 404)

Eyes - Rabbit

Result: No eye irritation

(OECD Test Guideline 405)

Maximization Test - Guinea pig

Result: Not a skin sensitizer.

(OECD Test Guideline 406)

Test Type: Micronucleus test

Test system: Human lymphocytes

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 487

Result: negative

Remarks: (in analogy to similar products)

The value is given in analogy to the following substances: Disodium molybdate dihydrate

Test Type: Ames test

Test system: Escherichia coli/Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

Remarks: (in analogy to similar products)

The value is given in analogy to the following substances: Disodium molybdate dihydrate

Test Type: In vitro mammalian cell gene mutation test

Test system: mouse lymphoma cells

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 476

Result: negative

Remarks: (in analogy to similar products)

The value is given in analogy to the following substances: Disodium molybdate dihydrate

No data available

No data available

No data available

Skin corrosion/irritation

Serious eye damage/eye irritation

Respiratory or skin sensitization

Germ cell mutagenicity

Carcinogenicity

Reproductive toxicity

Specific target organ toxicity - single exposure

Specific target organ toxicity - repeated exposure
Aspiration hazard

No data available
No data available

12. Ecological information

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Persistence and degradability

No data available

Toxicity to fish

Static test LC50 - Oncorhynchus mykiss (rainbow trout) - 75 mg/l - 96 h (OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates

Static test EC50 - Daphnia magna (Water flea) - 42,81 mg/l - 48 h (OECD Test Guideline 202) Remarks: (in analogy to similar products) The value is given in analogy to the following substances: maleic acid

Toxicity

Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 1.520 mg/l - 96 h

Toxicity to bacteria

EC10 - Bacteria - 14 mg/l - 72 h Remarks: (Lit.) EC5 - E.coli - 15.000 mg/l Remarks: (Lit.) (maximum permissible toxic concentration)

Toxicity to algae

Static test ErC50 - Pseudokirchneriella subcapitata (green algae) - 74,35 mg/l - 72 h (OECD Test Guideline 201) Remarks: (in analogy to similar products) The value is given in analogy to the following substances: maleic acid

Products Biodegradation

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

Mobility in soil

No data available

Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Endocrine disrupting properties

No data available

Other adverse effects

No data available .

13. Disposal considerations

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Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

Contaminated packaging

Dispose of as unused product.

Waste treatment Method

See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

14. Transport information

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UN number

ADR/RID: IMDG: IATA:

UN proper shipping name

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

Transport hazard class(es)

IATA: Not dangerous goods

Packaging group

ADR/RID: IMDG: IATA:

Environmental hazards

ADR/RID: IMDG: IATA:

Special precautions for user

ADR/RID: no IMDG Marine pollutant: no IATA: no

Further information

No data available

Not classified as dangerous in the meaning of transport regulations.

15. Regulatory information

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

Chemical Safety Assessment

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

For this product a chemical safety assessment was not carried out

16. Other information

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Other Information

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall we be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Rx Marine International has been advised of the possibility of such damages.

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