

ZIRCONIUM OXYCHLORIDE

Section 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name: Zirconium Oxychloride
CAS Number: 7699-43-6
EC Number: 231-717-9

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

Product use: For R&D use only, Not for medical, household or other use.

1.3 Details of the supplier of the safety data sheet

Company name: East Harbour Group Ltd
20 Clough Road, Severalls Industrial Park
Colchester, Essex, CO4 9QS
United Kingdom

Telephone: +44 (0) 333 242 0100
Email: info@eastharbourgroup.com

1.4 Emergency telephone number

Emergency telephone: 0800 246 1274

Section 2: Hazardous identification

2.1 Classification of the substance or mixture

Corrosive to metals, Category 1
Skin corrosion, Sub-category 1B
Serious eye damage, Category 1

2.2 Label elements

Labelling in accordance with Regulation (EU) No 1272/2008:

Pictograms:



Signal word

Danger

H Statements:

H290

H314

H335

P Statements:

P260

May be corrosive to metals

Causes severe skin burns and eye damage

May cause respiratory irritation

Do not breathe dust / fume / gas / mist / vapours / spray.



ZIRCONIUM OXYCHLORIDE

P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P303+P361+P353 IF ON SKIN (or hair): Remove/Take off Immediately all contaminated clothing. Rinse SKIN with water/shower.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

Prevention

P234 Keep only in original packaging
 P260 Do not breathe dust/fume/gas/mist/vapours/spray.
 P264 Wash ... thoroughly after handling.
 P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...

Response

P390 Absorb spillage to prevent material damage.
 P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
 P363 Wash contaminated clothing before reuse.
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P316 Get emergency medical help immediately.
 P321 Specific treatment (see ... on this label).
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P305+P354+P338 IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P317 Get medical help.

Storage

P406 Store in a corrosion resistant/...container with a resistant inner liner.
 P405 Store locked up.

Disposal

P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

2.3 Other hazards.

No data available

Section 3: Composition/information on ingredients

3.1 Substances

Chemical Name:	Zirconium Oxychloride
CAS Number:	7699-43-6
EC Number:	231-717-9
MF:	Cl ₂ OZr
MW:	178.13



ZIRCONIUM OXYCHLORIDE

Section 4: First aid measures

4.1 Description of first aid measures

If inhaled

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a doctor immediately. Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

Following skin contact

Take off contaminated clothing immediately. Wash off with soap and plenty of water. Consult a doctor.

Following eye contact

Rinse with pure water for at least 15 minutes. Consult a doctor.

Following ingestion

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

4.2 Most important symptoms and effects, both acute and delayed

No data available

4.3 Indication of any immediate medical attention and special treatment needed

No data available

Section 5: Fire-fighting measures

5.1 Fire Fighting Media and Instructions:

Use dry chemical, carbon dioxide or alcohol-resistant foam.

5.2 Special hazards arising from the substance or mixture

No data available

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

Section 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing mist, gas or vapours. Avoid contacting with skin and eye. Use personal protective equipment. Wear chemical impermeable gloves. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental precautions

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

6.3. Methods and material for containment and cleaning up

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.



ZIRCONIUM OXYCHLORIDE

Section 7: Handling and storage

7.1 Precautions for safe handling

Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

7.2 Conditions for safe storage, including any incompatibilities

Store the container tightly closed in a dry, cool and well-ventilated place. Store apart from foodstuff containers or incompatible materials..

Section 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure limit values

No data available

Biological limit values

No data available

8.2 Exposure controls /

Appropriate engineering controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

8.3 Personal protective equipment

Eye/face protection

Wear tightly fitting safety goggles with side-shields conforming to EN 166(EU) or NIOSH (US).

Skin protection

Wear fire/flame resistant and impervious clothing. Handle with gloves. Gloves must be inspected prior to use. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Respiratory protection

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

Thermal hazards

no data available

Section 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Crystal
Colour	Clear Colourless
Odour	No data available
Melting Point/Range	-15°C
Boiling Point/Range	No data available
Flammability	No data available
Upper/lower flammability or explosive limits	No data available
Flash point	No data available
Autoignition temperature	No data available



ZIRCONIUM OXYCHLORIDE

Decomposition temperature	No data available
pH	No data available
Kinematic Viscosity	No data available
Water solubility	No data available
Partition coefficient	No data available
n-octanol/water	
Vapor pressure	No data available
Density or Relative density	1.344 g/mL at 25 °C
Relative vapor density	No data available
Particle characteristics	No data available

Section 10: Stability and Reactivity

10.1 Reactivity	No data available
10.2 Chemical Stability	No data available
10.3 Possibility of hazardous reactions	No data available
10.4 Conditions to avoid	No data available
10.5 Incompatible materials	No data available
10.6 Hazardous decomposition products	No data available

Section 11: Toxicological Information

11.1 Toxicological effects:

Mixture

Acute toxicity

Oral: No data available

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

STOT-single exposure

No data available



ZIRCONIUM OXYCHLORIDE

STOT-repeated exposure
No data available

Aspiration hazard
No data available

Section 12: Ecological Information

12.1 Toxicity

Toxicity to fish: No data available
Toxicity to daphnia and other aquatic invertebrates: No data available
Toxicity to algae: No data available
Toxicity to microorganisms: No data available

Persistence and degradability
No data available

Bioaccumulative potential
No data available

Mobility in soil
No data available

Other adverse effects
No data available

Section 13: Disposal considerations

13.1 Waste treatment methods

Waste disposal of substance:

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

Container disposal:

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

Section 14: Transport Information

UN Number

ADR/RID:	UN3260
IMDG:	UN3260
IATA:	UN3260



ZIRCONIUM OXYCHLORIDE

UN Proper Shipping Name

ADR/RID: CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.
 IMDG: CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.
 IATA: CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.

Transport hazard class(es)

ADR/RID: 8
 IMDG: 8
 IATA: 8

Packing group, if applicable

ADR/RID: III
 IMDG: III
 IATA: III

Environmental hazards

ADR/RID: No
 IMDG: No
 IATA: No

Special precautions for user

No data available

Transport in bulk according to IMO instruments

VC1 VC2 AP7

Section 15: Regulatory Information

Safety, health and environmental regulations specific for the product in question

European Inventory of Existing Commercial Chemical Substances (EINECS)

Listed.

EC Inventory

Listed

United States Toxic Substances Control Act (TSCA) Inventory

Listed.

China Catalog of Hazardous Chemicals 2015

Not Listed.

New Zealand Inventory of Chemicals (NZIoC)

Listed.

PICCS

Listed.

Vietnam National Chemical Inventory

Listed

IECSC

Listed.

Korea Existing Chemicals List (KECL)

Listed



ZIRCONIUM OXYCHLORIDE

Section 16: Other Information

Abbreviations and acronyms

CAS: Chemical Abstracts Service

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

IMDG: International Maritime Dangerous Goods

IATA: International Air Transportation Association

TWA: Time Weighted Average

STEL: Short term exposure limit

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

EC50: Effective Concentration 50%

References

IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>

HSDDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>

IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>

eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en

CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>

ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>

ERG - Emergency Response Guidebook by U.S. Department of Transportation, website:

<http://www.phmsa.dot.gov/hazmat/library/erg>

Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>

ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>