



MATERIAL SAFETY DATA SHEET

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**CERIUM OXIDE**

**1 PRODUCT AND COMPANY INFORMATION**

Substance identification: CERIUM OXIDE  
Company identification: Keeling & Walker Limited,  
Whieldon Road,  
Stoke-on-Trent,  
ST4 4JA, ENGLAND.  
Emergency contact number: + 44 (0) 1782 744 136

**2 COMPOSITION / INFORMATION ON INGREDIENTS**

Chemical Nature: Cerium oxide.  
Impurities contributing to the hazard: Presence of very small quantities of radionuclides  
( $< 1$  Bq/g)

**3 HAZARDS IDENTIFICATION**

**MOST IMPORTANT HAZARDS:**  
Adverse human health effects : Slightly irritating to eyes.  
Physical and chemical hazards:  
- Fire or explosion: NO particular fire or explosion hazard.  
Classification/Specific hazards: According to EC criteria, this product is not  
classified as a "hazardous preparation".  
According to I.A.E.A. criteria, this product is not  
classified as "radioactive".

**4 FIRST AID MEASURES**

Inhalation: Move the affected person away from the  
contaminated area and into the fresh air.  
Skin Contact: Rinse with plenty of water.  
Eye contact: Rinse with plenty of water immediately.  
Ingestion: Rinse mouth out with water.  
Consult a doctor if necessary.  
Protection of First-Aiders: Respiratory protection with a particle filter.

**CERIUM OXIDE****5 FIRE-FIGHTING MEASURES**

Extinguishing media:	
Suitable:	All extinguishing agents can be used.
Not suitable:	None. If there is a fire close by, use suitable extinguishing agents
Specific hazards:	For further information refer to Section 10 "Stability and Reactivity".
Protection of Fire-Fighters:	Respiratory protection with particle filter.

**6 ACCIDENTAL RELEASE MEASURES**

Personal precautions:	Avoid contact with eyes. Personal protective equipment: <ul style="list-style-type: none"><li>- respiratory protection device with a particle filter.</li><li>- safety glasses.</li><li>- appropriate gloves.</li></ul>
Environmental precautions:	In order to avoid the disposal of material in suspension, transfer into a settling tank.
Methods for cleaning up:	
Recovery:	Collect up the product and place it in a spare container: suitably labelled.
Cleaning/Decontamination:	Wash the floor with plenty of water.
Disposal:	Dispose of materials or solid residues at an authorised site.

**7 HANDLING AND STORAGE**

Handling:	
Technical measures:	Dust extraction (suction).
Measures:	Use a wet method in preference to a dry one.
Safe handling advice:	Ensure that there is a suitable ventilation system.
Storage:	
Technical measures:	Does not require any specific or particular technical measures.
Storage Conditions:	
Recommended:	Stable under normal storage conditions.
Incompatible products:	Refer to the detailed list of incompatible materials (section 10 "Stability and Reactivity")
Packaging:	Packaging with a closing device.
Packaging materials:	
Recommended:	Plastic materials.
Not suitable:	None, to our knowledge.

**CERIUM OXIDE****8 EXPOSURE CONTROLS / PERSONAL PROTECTION**

Engineering measures:	Ensure good ventilation of the work station.
Occupational exposure limits:	
Limits (UK):	Total 10mg/m <sup>3</sup> . Respirable 5mg/m <sup>3</sup> . N.B. The Ionising Radiation Regulations 1985 may apply.
Limits (France):	VME: 10mg/m <sup>3</sup> . Alveolar dusts - VME: 5mg/m <sup>3</sup> .
Limits (U.S.A./A.C.G.I.H.):	TLV (TWA): 10mg/m <sup>3</sup> .
Surveillance procedures:	OEL: 0.5mg/m <sup>3</sup> (long term exposure limit - 8h TWA reference period). This value is based on the ionising potential of the product. Provided dust exposure is limited to this level, the 1985 Ionising Radiation regulations do not apply. Monitor the atmosphere at regular intervals.
Personal protective equipment:	
Respiratory protection:	Respiratory protective device with a particle filter.
Hand protection:	Protective gloves made of rubber.
Eye protection:	Safety spectacles.
Skin and body protection:	Protective clothing.
Collective emergency equipment:	Safety shower, eye fountain.
Hygiene measures:	Always take a shower after work.

**9 PHYSICAL AND CHEMICAL PROPERTIES**

Physical state:	Solid.
Form:	Fine powder.
Average particle size:	1-2µm.
Colour:	Creamy white.
Odour	None.
pH:	Not applicable (insoluble product).
Specific temperatures:	
Melting point:	>2000°C.
Flammability characteristics:	
Flash point:	Not applicable.
Oxidising properties:	Non oxidising material according to EC criteria.
Explosive limits in air:	Not applicable.
Apparent specific gravity:	1.3 - 1.7kg/dm <sup>3</sup> (Untamped product).
Solubility:	
in water:	Practically insoluble.
in organic solvents:	Insoluble in common solvents.

**CERIUM OXIDE****10 STABILITY AND REACTIVITY**

Stability:	Stable at ambient temperature and under normal conditions of use.
Hazardous reactions: Conditions to avoid:	No dangerous reactions known under normal conditions of use. May explode under specific conditions.
Materials to avoid:	No dangerous reactions known with common products.

**11 TOXICOLOGICAL INFORMATION**

Acute toxicity:	Dust (particles): LC50 inhalation (Rat) /4h: >5mg/l. LD50 skin (Rat): >2000mg/kg. LD50 ORAL (Rat): >2000mg.kg. (Cerium oxide)
Local effects:	Powdery product. May cause slight irritation to the ocular mucous membranes due to the presence of a foreign body.

**12 ECOLOGICAL INFORMATION**

Behaviour in the environment:	
Mobility:	Practically insoluble product, readily forms deposits.
Persistence/Degradability:	Persisting product.
Destination of the product:	Ultimate destination of the product: Soil and Sediment

**13 DISPOSAL CONSIDERATIONS**

Waste from residues: Destruction/Disposal:	Dispose of materials or solid residues at a licensed site.
Contaminated Packaging: Decontamination/cleaning: Destruction/disposal:	Wash with water. Entrust the thoroughly decontaminated packaging to a licensed waste-contractor.
NOTE:	The User's attention is drawn to the possible existence of local regulations regarding disposal.

**CERIUM OXIDE****14 TRANSPORT INFORMATION**

International regulations:

Land:

Rail/Road (RID/ADR):

Not restricted.

Sea (IMO/IMDG):

Not restricted.

Air (ICAO-IATA):

Not restricted.

Note:

The above regulatory prescriptions are those valid on the date of publications of this sheet.

Given the possible evolution of the transport regulations for hazardous materials, it would be advisable to check their validity with your sales office.

**15 REGULATORY INFORMATION**

Labelling:

EC regulations:

Mandatory labelling (self-classification) of hazardous preparations: Not applicable.

Note:

UK Legislation:

Handle in accordance with relevant British legislation:

Control of Substances Hazardous to Health Regulations.

Environmental Hygiene Guidance: EH/40

Occupational Exposure Limits (revised annually).

The regulatory information given above only indicates the principal regulations specifically applicable to the product described in the Safety data Sheet.

The User's attention is drawn to the possible existence of additional provisions which complete these regulations.

Refer to all applicable national, international and local regulations or provisions.

**16 OTHER INFORMATION**

Uses:

Recommended Uses:

Glass polishing.

Registration Numbers:

All the constituents of this preparation are registered in the EINECS inventory.

All the components of this preparation are registered in the TSCA inventory.

All the components of this preparation are registered in the MITI list (Japan).

The information given is based on our present state of knowledge and is given in good faith but without warranty.