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COBALT OXIDE BLACK

Safety Data Sheet

In compliance with Regulation (EC)1907/2006,
Regulation (EC) 1272/2008 and Regulation (EC) 453/2010
Date of issue: 03/03/2011 Revision date: 30/06/2013

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

1.1. Product identifier

Product name : Cobalt Oxide
EC no : 215-157-2
CAS No. : 1308-06-1
REACH registration No. : 01-2119517310-56

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

1.2.1. Relevant identified uses

Use of the substance/preparation:
Pigments; Manufacture of ceramic and glass; manufacturing of frit.

1.2.2. Uses advised against

None

1.3. Details of the supplier of the safety data sheet

Keramikos

Oudeweg 153

2031 CC Haarlem

T 023 – 542 44 16

1.4. Emergency telephone number

T 023 – 542 44 16



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SECTION 2: Hazards identification.

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Aquatic Chronic 2, H412

Classification according to Directive 67/548/EEC or 1999/45/EC Not classified

Full text of R-phrases: see section 16

Adverse physicochemical, human health and environmental effects None known

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 (CLP) No Pictograms.

No signal word.

Hazard statements: Harmful to aquatic life with long lasting effects.

Precautionary statements: Avoid release to the environment.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients.

3.1. Substances

Chemical name	CAS No.	EC-No.	%	Classification (67/548/EEC)	Classification (1272/2008/EC)
Cobalt (ii, iii) oxide	1308-06-1 497-19-8	215-157-2	>97.4% <3%	Not classified Irritating to eyes	Aquatic Chronic 3, H412 Eye Irrit. 2, H319
Sodium Carbonate		207-838-8			



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Full text of R-, H- and EUH-phrases: see section 16

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SECTION 4: First aid measures.

4.1. Description of first aid measures

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Ingestion: Wash out mouth with water. Remove denture if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain open airway. Loosen tight clothing such as a collar, tie and belt of waistband.

Skin contact: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse..

Eye contact: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

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

Potential acute health effects: No known significant effects or critical hazards. Over-exposure signs/symptoms: No specific data.

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

Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

SECTION 5: Firefighting measures.

5.1. Extinguishing media

Suitable extinguishing media: Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media: There are no known unsuitable extinguishing media.



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5.2. Special hazards arising from the substance or mixture

Decomposition products may include the following materials: Carbon dioxide; carbonate monoxide; metal oxide/oxides.

5.3. Advice for firefighters

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, boots and gloves) conformation to European standard EN469 will provide a basic level of protection for chemical incidents.

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SECTION 6: Accidental release measures.

6.1. Personal precautions, protective equipment and emergency procedures

Non-emergency personnel: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

Emergency personnel: If specialised clothing is required to deal with the spillage, take note of any Information in Section 8 on suitable and unsuitable materials. See also the information above for non-emergency personnel.

6.2. Environmental precautions

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

6.3. Methods and material for containment and cleaning up

Small spill: Move containers from spill area. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.

Large spill: Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.

6.4. Reference to other sections

Please see section 1 for emergency contact information.

Please see section 8 for Personal Protection Information.

Please see section 13 for Disposal Information.

SECTION 7: Handling and storage.

7.1. Precautions for safe handling

Put on appropriate personal protective equipment (see section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also section 8 for additional information on hygiene measures.



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7.2. Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and wellventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready to use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

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SECTION 8: Exposure controls/personal protection.

8.1. Control parameters

WEL – Skin Sensitiser. As Co, TWA: 0.1 mg/m³ 8 hours.

DNEL – Inhalation – Workers – 0.054 mg/m³.

PNEC – Sewage Treatment Plant: 1.51 mg/l PNEC –

Fresh Water: 2.08 µg/l.

PNEC – Marine: 9.65 µg/l.

PNEC – Fresh water sediment: 38.8 mg/kg dwt.

PNEC – Marine water sediment: 38.8 mg/kg dwt.

PNEC – Soil: 32.3 mg/kg dwt.

Recommended monitoring procedures: If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

8.2. Exposure controls

Engineering controls: No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended statutory limits. Hygiene measures: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Persons with a history or asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used.

Eye/face protection: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.



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SECTION 9: Physical and chemical; properties.

Physical state	Granular Powder
Colour	Black
Odour	odourless
Odour threshold	Not applicable
pH	No data available
Relative evaporation rate (butylacetate=1)	No data available
Melting point	No data available
Freezing point	No data available
Boiling point	No data available
Flash point	Not flammable
Self ignition temperature	Not applicable
Decomposition temperature	900°C
Flammability (solid, gas)	Not flammable
Vapour pressure	Not applicable.
Relative vapour density at 20 °C	No data available
Relative density	6.07 g/cm ³
Density	No data available
Solubility	Very slightly soluble in cold water
Log Pow	Not applicable
Log Kow	Not applicable
Viscosity, kinematic	Not applicable
Viscosity, dynamic	Not applicable
Explosive properties	Not explosive.
Oxidising properties	No data available
Explosive limits	Not applicable

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity.

10.1. Reactivity

No specific reactivity hazards associated with this product.

10.2. Chemical stability



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Stable under normal conditions of handling and storage.

10.3. Possibility of hazardous reactions

Not relevant.



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10.4. Conditions to avoid

Not relevant

10.5. Incompatible materials

No specific, or groups of materials, are likely to react to produce a hazardous situation.

10.6. Hazardous decomposition products

Not relevant

SECTION 11: Toxicological information.

11.1. Information on toxicological effects

Acute toxicity:

COBALT (II, III) OXIDE: LD50 Oral Rat: >5 g/kg.

SODIUM CARBONATE:

LC50 Inhalation Vapour, Guinea pig: 800 mg/m³ 2 hours.

LC50 Inhalation Vapour, Mouse: 1200 mg/m³ 2 hours.

LC50 Inhalation Vapour, Rat: 2300 mg/m³ 2 hours.

LD50 Intraperitoneal, Mouse: 117 mg/kg.

LD50 Oral, Mouse: 6600 mg/kg.

LD50 Oral, Rat: 4090 mg/kg.

LDLo Oral, Man, Male: 714 mg/kg.

TDLo Eyes, Rabbit: 25 mg/kg.

Skin corrosion/irritation: No information available.

Serious eye damage/irritation: No information available.

Sensitisation: No information available.

Inhalation of this material may cause sensitive individuals to develop eczema and/or asthma.

Germ cell Mutagenicity: No information available.

Carcinogenicity: No information available.

Reproductive toxicity: No information available.

STOT – Single exposure: No information available.

STOT – repeated exposure: No information available.

Aspiration hazard: No information available.

SECTION 12: Ecological information.

12.1. Acute fish toxicity

Cobalt (ii, iii) oxide:

Acute EC50, Daphnia, 48 hours: >136 mg/l.



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Acute LC50, Fish, 96 hours: >136 mg/l.

Sodium Carbonate:

Acute EC50, Fresh Water, Daphnia- Ceriodaphnia dubia Neonate, <24 hours: 199.82 mg/l.

Acute LC50, Fresh Water, Daphnia-Daphnia magna, 48 hours: 265000 ug/l.

Acute LC50, Fresh Water, Fish – Lepornis macrochirus 3.88cm – 0.96g, 96 hours: 300000 ug/l.

12.2. Persistence and degradability

No data available

12.3. Bioaccumulative potential

No data available

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

No data available

12.6. Other adverse effects None known.

SECTION 13: Disposal considerations.

13.1. Waste treatment methods

Product: The generation of waste should be avoided or minimised wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of these product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Packaging: The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions: This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information.

14.1. UN number

The product is not covered by international regulation on transport of dangerous goods (IMDG, IATA, ADR/RID).

14.2. UN proper shipping name

Not classified for transportation.

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14.3. Transport hazard class(es)

Not classified for transportation.

14.4. Packing group

Not classified for transportation.

14.5. Environmental hazards

Other information: No environmental hazards known with this product.

14.6. Special precautions for user

Not classified for transportation.

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

Not applicable.

SECTION 15: Regulatory information.

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

No information available.

15.2. Chemical Safety Assessment.

This product contains substances for which Chemical Safety Assessments are still required.

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SECTION 16: Other information.

This information is based upon current knowledge and is intended to satisfy health and safety requirements. It is not a technical or compositional specification. This information does not constitute an assessment of risk in the workplace.

This material has many industrial uses. No liability is accepted arising out of the use of this information or the use, application or processing of this product. If in doubt contact the supplier.

Hazard statements:

H412: Harmful to aquatic life with long lasting effects.

H319: Causes serious eye irritation.

DISCLAIMER OF LIABILITY The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable



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