

# SAFETY DATA SHEET

## Caput Mortuum

### 1. Identification

**Name of the product:** Caput Mortuum

**Recommended use:** Pigment, used in different places to give color.

**Details of the supplier of this safety data sheet:**

L. Cornelissen & Son  
105, Great Russell Street  
London  
WC1B 3RY  
Telephone: +442076361045  
Email: info@cornelissen.com

### 2. Hazard(s) identification

**Classification:**

Eye irritation, Category 2B (Chapter 3.3, mild eye irritant)

Carcinogenicity, Category 2 (Chapter 3.6, the placing of a chemical in Category 2 is done on the basis of evidence obtained from human and/or animal studies, but which is not sufficiently convincing to place the chemical in Category 1).

Specific target organ systemic toxicity-repeated exposure, Category 1, Inhalation, Lungs. (Chapter 3.9, produces significant toxicity in humans)

**NFPA Classification:**

Health Hazard:	1, Slight
Fire Hazard:	0, Insignificant
Reactivity Hazard:	0, Insignificant
Special Hazards:	None

**Labeling:**

**Symbol:** Health Hazard



**Signal word:** Danger

**Hazard statements:**

H320: Causes Eye Irritation

H372: Causes damage to lungs through prolonged or repeated exposure if inhaled.

**Precautionary statements:**

**Prevention:**

P201: Obtain special instructions before use.

P202: Do not handle until all safety precautions have been read and understood.

P260: Do not breathe dust.

P280: Wear protective eye protection.

**Response:**

P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P321: Specific treatment (see supplemental first aid instructions on this label). P337 + P313: If eye irritation persists: Get medical attention.

**Storage:**

P405: Store locked up.

**Disposal:**

P501: Dispose of contents to an authorized landfill in accordance with all applicable regulations.

### 3. Composition/Information on Complex Substance

**Chemical identity:** Silicon Dioxide matrix (26060 mg/kg) with mineral components.

**Common name:** Caput Mortuum, PR102

**Appearance:** Violet powder.

**Particle size:** 5- 25 mkm

**Numbers of identity:** CAS 14808-60-7

**Impurities:** Impurities are reacted into the matrix and do not present themselves as individual chemicals. They are represented as oxides to give them an identity. They contribute to the classification since they are eye irritants and are over 1% of the total weight.

Chemical Identity	Common Name	Numbers of Identity CAS#	Concentration mg/kg
SiO <sub>2</sub>	Silicon Dioxide	14808-60-7	26060 including quartz
TiO <sub>2</sub>	Titanium Dioxide	13463-67-7	4958
Al <sub>2</sub> O <sub>3</sub>	Aluminum Oxide	1344-28-1	5989
Fe <sub>2</sub> O <sub>3</sub>	Iron Oxide	1309-37-1	63870
MgO	Magnesium Oxide	1309-48-4	< 46
CaO	Calcium Oxide	1309-78-8	2886
MnO	Manganese oxide	1313-13-9	1449
K <sub>2</sub> O/NaO	Potassium Oxide Sodium Oxide	37382-43-7 12401-86-4	662.0 1630
Quartz (Crystalline)	Quartz	14808-60-7	ND

Note: Detection Limit for Crystalline Quart is 0.75%

### 4. First - aid measures

#### **Skin contact:**

Since pigment particles will dry the skin, it is advisable to wash the contaminated area with soap and water. Remove contaminated clothing and wash before reuse. If irritation develops, get medical attention.

#### **Eye contact:**

Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes, tilting head sideways to allow the water to wash out the dust. If irritation persists, seek medical attention.

**Ingestion:**

If swallowed, do NOT induce vomiting. Other than abdominal discomfort there should be no acute exposure problems from small amounts ingested (less than 5 grams). If massive quantities are ingested, seek medical attention.

<b>5. Firefighting measures</b>
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This product is not flammable, combustible or explosive.

**Suitable extinguishing media:** Not applicable.

**Unsuitable extinguishing media:** Not applicable.

**Specific hazards in case of fire:** Not applicable.

**Special protective equipment and precaution for fire fighters:** Not applicable.

<b>6. Accidental release measures</b>
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**Personal precautions, protective equipment and emergency procedures**

For small spills less than 1.0 kilogram (2.2 pounds): Wear OSHA approved dust mask for silica contaminated atmospheres above the OSHA Permissible Exposure Limit of 0.25 mg/M<sup>3</sup> (0.25 milligrams per cubic Meter). Wear safety goggles. Keep eyewash station nearby or keep pure bottled water for rinsing eyes in case of getting dust in your eye. Do not breathe dust in the air formed from the spill. Gently, without creating dust in the air, use a gloved hand or a spatula to push the powder into a plastic bag or closeable container, label and seal immediately. Do not let people or vehicles walk or drive over the spill. This will prevent dust from being put into the air. Wet mop or wash the area free of the dust using water.

For large spills greater than 1.0 kilogram (2.2 pounds): Follow directions for small spills and add these directions: Do not dry sweep. Wear protective equipment specified in section 8. Use dustless methods (vacuum with HEPA filter) and place into closable container for disposal, or flush using water.

**Environmental precautions:**

This product will not harm the environment but the strong characteristic color may stain surfaces.

## **Methods and materials for containment and cleaning up:**

For small spills less than 1.0 kilogram (2.2 pounds): Gently, without creating dust in the air, use a gloved hand or a spatula to push the powder into a plastic bag or closeable container, label and seal immediately. Do not let people or vehicles walk or drive over the spill to prevent dust from being put into the air. Wet mop or wash the area free of the dust using water. Dispose of the rinse water in an approved landfill.

For large spills greater than 1.0 kilogram (2.2 pounds): Use dustless methods (vacuum with HEPA filter) (High Efficiency Particulate Air) and place into closable container for disposal in an approved landfill. Wet mop or wash the area free of the dust using water. Dispose of the rinse water in an approved landfill.

## ***7. Handling and storage***

### **Precautions for safe handling:**

As this material is intended to be mixed into liquids or plastic pellets, there is considerable dust put into the air from this operation. Use an air flow over the mixing container away from the operator into a vacuum filter to arrest the dust. Wear protective equipment specified in section 8, such as proper goggles and dust mask. Do not breathe dust. Use adequate ventilation and dust collection. Keep airborne dust concentrations below the permissible exposure limit ("PEL") of 0.25 mg/M<sup>3</sup> (0.25 milligrams per cubic Meter). Do not rely on your sight to determine if dust is in the air. Respirable crystalline silica dust may be in the air without a visible dust cloud.

If crystalline silica dust cannot be kept below permissible limits, wear a respirator approved for silica dust when using, handling, storing or disposing of this product or bag. See section 8 for further information on respirators. Practice good housekeeping. Do not permit dust to collect on walls, floors, sills, ledges, machinery, or equipment. Maintain, clean, and fit test respirators in accordance with OSHA regulations. Maintain and test ventilation and dust collection equipment. Wash or vacuum any clothing that has become dusty.

Beware of tracking pigment into other areas from the pigment on the bottoms of your shoes. Wash hands after use.

The OSHA Hazard Communication Standard, 29 CFR Sections 1910.1200, 1915.1200, 1917.28, 1918.90, 1926.59 and 1928.21, and state and local worker or community "right-to-know" laws and regulations should be strictly followed.

### **Conditions for safe storage, including incompatibilities:**

Keep containers tightly closed in a dry and well-ventilated place. Avoid breakage of bagged material or spills of bulk material. Cleanup: Use dustless methods (vacuum) and place into closable container for disposal, or flush with water. Do not dry sweep. See personal protection measures in section 8. Minimize dust generation and accumulation. Avoid breathing dust. Avoid contact with eyes. Seal broken bags immediately. Continue to follow all SDS/Label warnings when handling empty containers. Do not store next to strong acids such as hydrofluoric acid. Do not store next to chemicals that react with silica such as silanes .

## ***8. Exposure controls / personal protection***

### **Appropriate engineering controls**

#### **Ventilation:**

Use in well-ventilated area with local exhaust. Collect dust right at the source using vacuum filter bag. Keep dust concentration below the PEL (permissible exposure level). If crystalline silica (quartz) is heated to more than 870C, it can change to a form of crystalline silica known as tridymite; if crystalline silica quartz) is heated to more than 1470C it can change to a form of crystalline silica known as cristobalite. The OSHA PEL for crystalline silica as tridymite or cristobalite is one-half of the OSHA PEL for crystalline silica (quartz).

### **Individual protection measures, such as personal protective equipment (PPE).**

#### **Eye protection:**

Safety glasses with side shields or chemical goggles must be worn. This will prevent airborne crystalline silica dust from entering the eyes and abrading the cornea.

#### **Skin protection:**

Good personal hygiene practices should always be followed.

#### **Respiratory protection:**

If it is not possible to reduce airborne exposure levels to below the OSHA PEL with ventilation, use the table below to assist you in selecting respirators that will reduce personal exposures to below the OSHA PEL. This table is part of the NIOSH Respirator Selection Logic, 2004, Chapter III, Table 1, "Particulate Respirators". The full document can be found at [www.cdc.gov/niosh/npptl/topics/respirators](http://www.cdc.gov/niosh/npptl/topics/respirators); the user of this SDS document is directed to that site for information concerning respirator selection and use.

The assigned protection factor (APF) is the minimum anticipated level of protection provided by each type of respirator worn in accordance with an adequate respiratory protection program. For example, an APF of 10 means that the respirator should reduce the airborne concentration of a particulate by a factor of 10, so that if the workplace concentration of a particulate was 150ug/m<sup>3</sup>, than a respirator with an APF of 10 should reduce the concentration of particulate to 15 ug/m<sup>3</sup>.

Assigned protection Factor (APF)	Type of Respirator (Use only NIOSH-certified respirators)
10	Any air-purifying elastomeric half-mask respirator equipped with appropriate type of particulate filter.(2) Appropriate filtering face piece respirator. (2)(3) Any air-purifying full face piece respirator equipped with appropriate type of particulate filter.(2) Any negative pressure (demand) supplied-air respirator equipped with a half-mask.
25	Any powered air-purifying respirator equipped with a hood or helmet and a high efficiency (HEPA) filter. Any continuous flow supplied-air respirator equipped with a hood or helmet.
50	Any air-purifying full face piece respirator equipped with N-100, R-100, or P-100 filter(s). Any powered air-purifying respirator equipped with a tight-fitting face piece (half or full face piece) and a high-efficiency filter. Any negative pressure (demand) supplied air respirator equipped with a full face piece. Any continuous flow supplied-air respirator equipped with a tightfitting face piece (half or full face piece). Any negative pressure (demand) self-contained respirator equipped with a full face piece.
1,000	Any pressure-demand supplied-air respirator equipped with a half-mask.

#### **Explanation for numbers given above:**

1. The protection offered by a given respirator is contingent upon (1) the respirator user adhering to complete program requirements (such as the ones required by OSHA in 29CFR1910,134), (2) the use of NIOSH certified respirators in their approved configuration, and (3) individual fit testing to rule out those respirators that cannot achieve a good fit on individual workers.
2. Appropriate means that the filter medium will provide protection against the particulate in question.
3. An APF of 10 can only be achieved if the respirator is qualitatively or quantitatively fit tested on individual workers.

## ***9. Physical and chemical properties***

**Physical state:** Solid (Powder)  
**Colour:** Violet  
**Odour:** Odorless  
**Odour threshold:** Odorless  
**pH-value:** Not applicable melting  
**point:** Not applicable  
**Freezing Point:** Not applicable  
**Initial boiling point:** Not applicable  
**Flash point:** - Not flammable  
**Evaporation rate:** Not applicable  
**Flammability (solid, gas):** Not flammable  
**Explosion limits:** Not applicable  
**Vapour pressure:** Not applicable  
**Vapour density:** Not applicable  
**Relative density:** 2.65 g/ml for crystalline silica  
**Solubility:** insoluble in water and organic solvents  
**Partition coefficient:** Not applicable  
**Auto-ignition temperature:** Not applicable  
**Decomposition temperature:** Not applicable  
**Viscosity:** Not applicable

## ***10. Stability and reactivity***

**Reactivity:** Crystalline silica (quartz) will react with powerful oxidizing agents such as fluorine, chlorine trifluoride and oxygen difluoride. It is not reactive when used in the normal manner intended for its use.

**Chemical stability:** No decomposition, if used according to specifications, under normal ambient temperatures and normal storage and handling conditions of temperature and pressure.

**Possibility of hazardous reactions:** None known.

**Conditions to avoid:** Do not mix with powerful oxidizing agents.

**Incompatible materials:** Halogens, strong acids, alkalies and oxidizers.

**Hazardous decomposition products:** None are known.

## **11. Toxicological information**

The method of exposure to crystalline silica that can lead to the adverse health effects described below is eye penetration.

**Eye Hazard:**

**Acute Toxicity:**

<b>Test</b>	<b>Results</b>	<b>Basis</b>
Eye Irritation (Rabbits)	Eye Irritant Category 2B	Based on Testing of Similar Materials

**Summary Comments:** May cause slight eye irritation like ocular lesions, which are reversible.

**Skin corrosion/irritation:** Has not been found to occur as observed from general practices.

**Germ cell mutagenicity:** Data is not available.

**Reproductive toxicity:** Data is not available.

**STOT-single exposure:** Eyes and lungs specific target organ toxicity have been shown through general observation and IARC studies.

**STOT-repeated exposure (Specific Target Organ Toxicity):** Eyes and lungs are at risk for eye irritation and lung silicosis and lung cancer, through general observation and IARC studies.

**Aspiration hazard:** Data is not available.

## **12. Ecological information**

Crystalline silica (quartz) is not known to be ecotoxic ; i.e., there are no data that suggests that crystalline silica (quartz) is toxic to birds, fish, invertebrates, microorganisms or plants. Therefore, persistence and degradability, bio accumulative potential and mobility in the soil are not factors to be considered.

### **13. Waste Disposal**

General: The packaging and material may be landfilled; however, material should be covered to minimize generation of airborne dust.

RCRA: Crystalline silica (quartz) is not classified as a hazardous waste under the Resource Conservation and Recovery Act or its regulations, 40 CFR Sec.

261 et seq. Metal containers are preferred so as to minimize spills due to accidents. Empty the containers downwind wearing appropriate PPE. Sewage disposal is discouraged.

The above applies to materials as sold by L.Cornelissen & Son. The material may be contaminated during use, and it is the responsibility of the user to assess the appropriate disposal of the used material.

### **14. Transport information**

#### **US DOT (United States Department of Transportation)**

Crystalline silica (quartz) is not a hazardous material for purposes of transportation under the U.S. Department of Transportation Table of Hazardous Materials, 49 CFR Sec 172.101.

#### **IMO/IMDG (International Maritime Dangerous Goods)**

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY

#### **IATA (International Air Transport Association)**

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY

#### **ADR (Agreement on Dangerous Goods by Road (Europe))**

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY

#### **RID (Regulations concerning the International Transport of Dangerous Goods (Europe))**

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY

#### **ADN (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)**

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code.** Permitted to be carried.