



# Material Safety Data Sheet

## Graphite Powder

Edition: 21/02/2017

### 1) Identification of substance/preparation and of the company undertaking

Material Natural or synthetic graphite powder  
 REACH No 01-2119486977-12  
 CAS No 7782-42-5  
 EINECS No 231-955-3  
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### 2) Hazard Identification

Classification Not classified under CLP  
 Health Risks Airborne dust may cause irritation to the eyes, nose and upper respiratory tract.  
 Spillage on floors and stairways may present a safety hazard by making them slippery.  
 Braking ability on plant, machinery, passenger and other vehicles may be drastically reduced by graphite contamination.  
 There is no evidence of carcinogenic properties. There is no evidence of mutagenic or teratogenic effects.

### 3) Composition

Both natural and synthetic graphites are comprised mostly of graphitic carbon. That which is not graphitic carbon forms the impurity or ash upon oxidation and will vary according to the nature of the graphite, whether these are remnants of the ore from which the graphite is mined in the case of natural graphite or from petrochemical impurities which remain ungraphitised in the case of synthetic graphite.

### 4) First Aid Measures

Inhalation Symptoms: Breathing difficulties may be encountered if the patient has been exposed to a large volume of airborne dust.  
 Treatment: Patient should retreat or be removed to an area where dust is below the exposure limit. If breathing difficulties continue, medical assistance should be sought.

Skin contact Symptoms: None  
 Treatment: None required, other than for reasons of personal hygiene.

Eye contact Symptoms: Dusty or gritty sensation in the eye causing impaired vision and/or watering of the eyes.  
 Treatment: patient should retreat or be removed to an area where re-contamination will not occur. Eyes should be washed thoroughly using an approved saline eye wash. If irritation continues, seek medical assistance.

Ingestion                      Symptoms: Dusty or gritty sensation in the mouth and throat.  
 Treatment: patient should retreat or be removed to an area where re-contamination will not occur. If ingestion is of a small quantity then the mouth should be rinsed or washed out with water or mouth wash. Seek medical attention if the quantity ingested is large.

## 5) Fire Fighting

Graphite is not readily combustible; nor is it readily explosive. It slowly decomposed in the presence of oxygen at 800 Celsius.

Extinguishing media	Water, CO <sub>2</sub> or sand.
Combustion products	CO <sub>2</sub> and CO
Special hazards	As an electrical conductor, graphite may pose a potential threat of short circuit to electrical equipment.

## 6) Accidental Release

Personal precautions	Not necessary other than dust masks or respirator to combat airborne dust and protective clothing to prevent physical contamination.
Environmental precautions	Efforts should be made to prevent the product becoming airborne.
Cleaning methods	At all times the spillage should be removed by vacuum cleaner where possible, so as to reduce the creation of dust. Should this not be possible then the product may be carefully swept avoiding unnecessary creation of airborne dust. Material should be transferred to a covered salvage container for appropriate disposal.
Eye protection	As with any airborne dust, eye contamination should be avoided and in consequence, dust proof goggles or masks should be worn in situations where there is any dust emission.
Hand protection	Not considered necessary other than for reasons of personal hygiene. However, a suitable barrier cream may be used as an aid to subsequent hand cleaning.
Skin protection	Not considered necessary other than for reasons of personal hygiene. Dust proof overalls with elasticated wrists/ankles and barrier cream may be useful in the regard.

## 7) Handling/Storage

Handling	No special requirements, but care should be taken to ensure the minimum release of airborne dust to prevent inhalation.
Storage	For the purpose of safety there are no special measures that should be adopted. Naturally, spillage should be avoided and to this end packaging should be protected from water damage, condensation or excess humidity and ultra violet light. Graphite is an inert mineral and will not decompose with age.

## 8) Exposure Controls

Exposure controls	Handling systems and plant should be enclosed or suitably served by ventilation or dust extraction equipment to minimize release to atmosphere
Exposure limits	TLV (Threshold Limit value) = 10mg/m <sup>3</sup> PEL (Personal Exposure Limit) = 15mg/m <sup>3</sup>

Respirable Dust = 5mg/m<sup>3</sup>  
 Total inhalable dust = 10mg/m<sup>3</sup>  
 UK 8 Hour TWA = 4mg/m<sup>3</sup>

Respiratory protection As with any airborne dust, inhalation should be avoided and in consequence dust masks or respirators should be worn in situations where there is any dust emission.

**9) Physical/Chemical Properties**

Appearance	Grey/black powder
Specific gravity	1.9 – 2.3
Vapour pressure	Negligible at room temperature
Volatile by weight	Negligible at room temperature
Solubility in water	Insoluble or immiscible
Melting point	Approx 2820 Celsius

**10) Stability/Reactivity**

Stability	Stable
Decomposition products	CO and CO <sub>2</sub> when burned

**11) Toxicological Info**

Both natural and synthetic graphites have the potential to contain free silica. Considerable dust exposure and inhalation as found in, for instance, mining may result in graphite pneumoconiosis or graphitosis. Graphitosis is now a recognised disease which may progress after the cessation of exposure.

**12) Ecological Information**

No information available.

**13) Disposal Consideration**

Both natural and synthetic graphites may be collected and reused subject to conditions or may be buried as non hazardous waste in sanitary landfill or burnt in a suitable incinerator.

**14) Transport Information**

Not classified as hazardous for transport

**15) Regulatory Information**

Not classified under current CLP regulations. Dust from this material is classified as a nuisance dust with an OEL of 10 mg/m<sup>3</sup>

**16) Other Information**

This information is for health and safety guidance only, is not a material specification, and does not constitute the user's own assessment of suitability, and workplace risk as required by any other Health and Safety legislation. It is accurate to the best of our knowledge and belief, but since the conditions of handling and use are outside our control we make no guarantee of results, and assume no liability for damages incurred by use of this material.