

MATERIAL SAFETY DATA SHEET
ISSUE SIX – AUGUST 2002

1. SUBSTANCE AND COMPANY IDENTITY

Supplier: FLINT HIRE & SUPPLY LTD
QUEENS ROW
LONDON SE17 2PX

TEL: 020 7703 9786

Emergency Telephone Number: 01992 577334

Description: Natural Graphite Powder

Grade Reference: 2096

C.A.S. Number: 7440-44-0

2. INGREDIENT AND COMPOSITION INFORMATION

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 this be remnants of the ore from which the graphite is mined in the case of natural graphite or from petrochemical impurities which remain un-graphitised in the case of synthetic graphite.

3. HAZARDS IDENTIFIED

Classification: Not classified under "CHIP 3 Regulations" (Chemicals & Hazard Information and Packaging 2002).

Health Risks: Airborne dust may cause irritation to the eyes, nose and upper respiratory tract.

Graphite is electrically conductive and may therefore present a potential hazard to electrical equipment.

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

4. FIRST AID MEASURES

A. INHALATION

Symptoms: Breathing difficulties may be encountered if the patient has been exposed to a large volume of airborne dust.

First Aid 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.

B. SKIN CONTACT

Symptoms: None

First Aid Treatment: None required, other than for reasons of personal hygiene.

C. EYE CONTACT

Symptoms: Dusty or gritty sensation in the eye causing impaired vision and /or watering of the eyes. Eyes should be washed thoroughly using an approved Saline eye wash. If irritation continues, seek medical assistance.

First Aid Treatment: Patient should retreat or be removed to an area where re-contamination will not occur.

D. INGESTION

Symptoms:	Dusty or gritty sensation in the mouth and throat.
First Aid 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 may be rinsed or washed out with water or mouth wash. Seek medical attention if quantity ingested is large.

5. FIRE FIGHTING MEASURES.

	Graphite is not readily combustible; nor is it readily explosive. It slowly decomposes in the presence of oxygen at 800 ° Centigrade.
Extinguishing Media:	Water, CO ₂ or sand
Special Exposure Hazards:	As an electrical conductor, graphite may pose a potential threat, of short circuit to electrical equipment.
Hazardous Decomposition:	CO and CO ₂
Fire Fighters Advice:	None

6. ACCIDENTAL RELEASE MEASURES

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/comfort. Dust proof overalls with elasticated wrists/ankles and barrier cream may be useful in this regard.

7. HANDLING AND STORAGE

- Storage: For the purposes 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. Exposure over a long period to any or all of the above may result in the failure of the packaging. Graphite is an inert mineral and will not decompose with age.
- Handling: Again, no special requirements but care should be taken to ensure the minimum release of airborne dust to prevent inhalation.

8. EXPOSURE CONTROL (PERSONAL PROTECTION)

- 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^3
PEL (Personal Exposure Limit) = 15mg/m^3
Respirable Dust = 5mg/m^3
Total inhalable dust 10 mg/m^3
- 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 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° Centigrade
Autoflamability:	N/A
Explosive Properties:	N/A
Oxidizing Properties:	N/A
Boiling Point	N/A
Flash Point	N/A

10. STABILITY AND REACTIVITY

Stability: Stable

Decomposition Products: CO and CO₂ when burned.

11. TOXICOLOGICAL INFORMATION

Both Natural and Synthetic graphites have the potential to contain free silica. Considerate 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 CONSIDERATIONS

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. TRANSPORTATION INFORMATION

There are no special measures which need to be observed with regard to transportation (e.g. temperature control) other than the normal containment measures associated with bagged mineral powders and those hazards identified in Section 3.

15. REGULATORY INFORMATION

Graphite is not classified by CHIP 3 (Chemicals Hazard Information and Packaging) Regulations 2002.

Relevant Legislation:

Health and Safety at Work Act 1974

Factories Act 1961

Chemicals Hazard Information and Packaging Regulations 2002

Road Traffic (Carriage of Dangerous substances in Tankers and Tank Containers) Regulations 1992.

Carriage of dangerous Goods by Road by Rail (classification, packaging and Labelling) regulations 1994.

Control of Substances Hazardous to Health Regulations 1994.

16. OTHER INFORMATION

The information supplied within this document is provided to the best of our current knowledge and is designed to describe our products from a Health and Safety perspective. The information will be revised as and when new information becomes available or is required.

It is the customers responsibility to ensure that the product is suitable for use within its own process and to ensure that a suitable risk assessment has been conducted with regard to the use of our product.

Should this product be resold, details of the hazards and recommendations for its safe use should be communicated to the user.