

PRODUCT NAME: **EXOWELD™ GRAPHITE**

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SDS DOCUMENT NUMBER: EXO-QM-QD-SDS-GRA

VERSION: 01.01 (2017/08/08)

1 - IDENTIFICATION OF THE SUBSTANCE AND THE COMPANY**PRODUCT IDENTIFIER**Product name: Exoweld© GraphiteTrade name: Graphite Special ProductsSynonyms: Graphite Blocks, Graphite Rounds, Graphite MouldsChemical name: Carbon/ Synthetic GraphiteChemical formula: C

Notice from the supplier: The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to the use in combination with other material or in any process. While Exoweld believes that the information contained herein is current as of the date of this Material Safety Data Sheet, Exoweld (Pty) Ltd does not warrant the accuracy thereof.

Since the use of this information and of these opinions and the condition of use of the product are not within the control of Exoweld (Pty) Ltd, it is the user's obligation to determine the conditions of safe use of the product.

DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

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2 - HAZARDS IDENTIFICATION**CLASSIFICATION OF THE SUBSTANCE OR MIXTURE**

- Effect and symptoms on skin:** Mechanical Injury only. Products to be used in whole form and not machined to create dust which can be an irritant.
- Effect and symptoms on eyes:** Mechanical Injury only. Products to be used in whole form and not machined to create dust which can be an irritant.
- Upper respiratory tract:** Mechanical Injury only. Products to be used in whole form and not machined to create dust which can be an irritant. High concentration of graphite dust may be irritating to the mucous membranes and respiratory tract. Over prolonged periods of time high concentrations of graphite dust may cause a graphite pneumoconiosis. Symptoms can include cough, shortness of breath and a decrease in pulmonary function. Pre-existing pulmonary and dermal disorders may possibly be aggravated by prolonged exposure to high concentrations of graphite dust.

Exposure to reaction by-products: [See section 8](#)**3 - COMPOSITION / INFORMATION ON INGREDIENTS****MIXTURES**

% by weight	CAS No.	Chemical name
100%	7782-42-5	Carbon/ Synthetic Graphite

References: The full text for all hazard statements is displayed in [section 16](#).**4 - FIRST AID MEASURES**

- Inhalation:** For overexposure to particulate matter, remove the exposed to fresh air. If breathing is difficult, oxygen may be administered. If breathing has stopped, artificial respiration should be started immediately. **Seek medical attention.**
- Skin:** Wash thoroughly with mild soap and water. Seek medical attention if irritation develops or persists. Dermatitis should be treated symptomatically by a physician.
- Eyes:** Flush with water for at least 15 minutes. Check for and remove any contact lenses. **Seek medical attention if irritation develops or persists.**
- Ingestion:** Do not induce vomiting unless directed to do so by a physician. Loosen tight clothing and consult a medical professional.



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Notes to physician: No additional remarks.

Notes to first-aiders: No additional remarks.

5 - FIREFIGHTING MEASURES

Extinguishing Media: Bulk material is non-combustible. Dusts are combustible - use water spray (do not use water jet), carbon dioxide, dry chemical powder or foam.

Special hazards: Thermal decomposition or combustion may produce dense smoke, oxides of carbon and low molecular weight organic compounds whose composition has not been characterized.

Protective clothing: Material in or near fires should be cooled with a water spray or fog. A self-contained breathing apparatus, operating in the positive pressure mode, and full firefighting protective clothing should be worn for combatting fires.

Special remarks: Graphite will ignite in contact with Chlorine trifluoride and fluorine. Dust may ignite in contact with air.

6 - ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Personal precautions: Personnel involved in the clean-up should wear appropriate personal protective equipment.

Environmental precautions: Do not allow material to enter storm or sanitary sewers, ground water or soil.

Small spills: Spilled material should be picked up with a suitable implement. If not reusable, the material should be placed in approved containers for disposal.

Large spills: Spilled material should be picked up with a suitable implement. If not reusable, the material should be placed in approved containers for disposal.

See [section 8](#) for personal protective equipment and [section 13](#) for waste disposal.

7 - HANDLING AND STORAGE

Suitable material: Do not let material accumulate in the workplace. Promptly clean up any spills that may occur. Any dust generated during handling or processing should be cleaned up by wet mopping or vacuuming with a unit that contains a HEPA filter.

Handling and storage: Store away from heat, sparks, open flames and other sources of ignition. Do not store with or near incompatible chemicals (strong oxidizing and reducing agents).



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8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures: If dust is formed during machining or handling, use general or local exhaust ventilation to control airborne concentrations to below the occupational exposure limits. However, these products should not be machined or handled in any way other than the specified use of the supplier.

Occupational exposure limits:

CAS No.	Chemical name	Exposure limits (dust)	References
7782-42-5	Graphite	2 mg/m ³	USA ACGIH (TWA/TLV)
7782-42-5	Graphite	2.5 mg/m ³	USA NIOSH (TWA/TLV)
7782-42-5	Graphite	15 mg/m ³ 15 mg/m ³	USA OSHA (TWA) DUST USA OSHA (TWA) RESP

* Consult local authorities for acceptable exposure limits

EXPOSURE CONTROLS

Respiratory equipment: If exposures exceed the limits cited above by less than a factor of 10, use a minimum SASS approved 2 face piece respirator equipped with cartridges approved for particulate matter with an exposure limit of not less than 0.05 mg/m³.
If exposures exceed 10 times the limits cited above, consult a professional industrial hygienist or your respiratory protective equipment supplier for selection of proper equipment. The evaluation of the need for respiratory protection should be determined by a professional industrial hygienist.

Skin and body: No particular requirement.

Hands: Protective gloves are recommended to prevent cuts, abrasions and irritation during handling and processing.

Eyes: Protective glasses should be worn to prevent eye contact with particulate matter. Side shields should be worn when there is a possibility of flying particulate during processing and use.

Other protection: Where normal work clothes may become soiled by dusts, overalls are recommended. Wash soiled clothing before use.



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9 - PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

<u>Appearance:</u>	Black solid / Crystalline solid
<u>Odour:</u>	None
<u>pH:</u>	Not applicable
<u>Boiling point:</u>	Not applicable
<u>Melting point:</u>	Greater than 2760°C (5000°F)
<u>Flash point:</u>	Not applicable
<u>Vapour pressure:</u>	Not applicable
<u>Specific gravity:</u>	Approximately 2.0 (Water = 1)
<u>Flammability:</u>	Not applicable
<u>Auto-flammability:</u>	See section 5
<u>Explosive properties:</u>	None
<u>Oxidizing properties:</u>	None
<u>Solubility in water:</u>	Insoluble in cold water
<u>Solubility – solvent:</u>	Not applicable
<u>Solubility – coefficient:</u>	Not applicable
<u>Neurotoxicity:</u>	Not applicable



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10 - STABILITY AND REACTIVITY

CHEMICAL STABILITY

Stability: Stable.

CONDITIONS TO AVOID

Conditions / materials to avoid: None that are known. Material is stable. Hazardous polymerization will not occur.

INCOMPATIBLE MATERIALS

Incompatible materials: Avoid contact with strong oxidizing and reducing agents.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous decomposition: These would be expected only during emergency conditions. Thermal decomposition or combustion may produce dense smoke, oxides of carbon, nitrogen, and sulphur as well as low molecular weight organic compounds whose composition has not been characterised.

11 - TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

No toxic effects are associated specifically with uncontaminated carbon or graphite or with carbon graphite products with additives, but with no relevant quantities of ingredients classified hazardous according to 67/548/EEC and Hazardous Chemical Substances Regulation of 1995. Irritant in eyes, on skin or upon inhalation.

12 - ECOLOGICAL INFORMATION

No harmful ecological effects are expected to arise provided the emission of dust and fume to the air and the contamination of ground and water are minimised.

13 - DISPOSAL CONSIDERATIONS

Methods of disposal: Disposal in an approved landfill is recommended.

Disposal of packaging: Disposal in an approved landfill is recommended.



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14 - TRANSPORT INFORMATION

LOCAL / INTERNATIONAL TRANSPORT REGULATIONS

This product is not classified as dangerous for transport under DOT US, IMDG and IATA

Regulatory information	UN Number	Proper shipping name	Class	Packing group	Label	Additional information
SASS 0228 - Class Land - Road I Railway	Not regulated	---	---	---	---	---
IMDG – Class Sea	Not regulated	---	---	---	---	---
IATA – DGR Class Air	Not regulated	---	---	---	---	---



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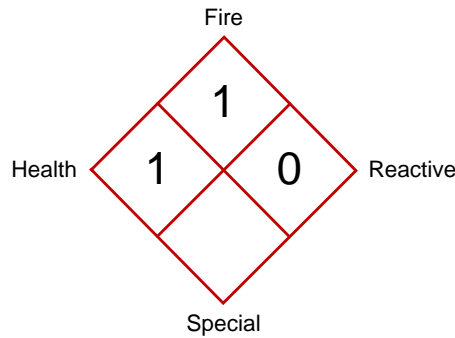
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15 - REGULATORY INFORMATION

HAZARD SYMBOL(S)

NFPA	Hazard rating
0	Insignificant
1	Slight
2	Moderate
3	High
4	Extreme



Pertinent EC legislation: 67/548/EEC Dangerous Substance Directive

88/379/EEC Dangerous Preparations Directive

91/155/EEC Safety Data Sheets Directive

Local legislation: Hazardous Chemical Substances Regulation of 1995

Occupational Health and Safety Act. No. 85 of 1993



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16 - OTHER INFORMATIONOther special considerations:

Graphite dusts are electrically conductive. Accumulations of dust may cause shortening of electrical circuits. Care should be taken to seal circuits and switches that may be affected. Dusts should not be emitted to the atmosphere where they may settle on and cause shortening of outside electrical equipment.

The ingredients in this product are listed on the following chemical inventories:

US – TSCA

EC – EINECS

Canada - DL

The information and recommendations on this data sheet is to the best of our knowledge and belief that it is accurate, but do not constitute a warranty. None of our representatives or agents are authorized to give any guarantee, warranty, or make any representation in addition or contrary to the above. We do not accept liability for claims of any kind for any loss including, and without limitation, consequential loss, injury or damage arising from the use of the information, recommendations or of the products, which are the subject of this document.

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