



SAFETY DATA SHEET

Section 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Graphite Dry Powder
 Other Identifiers: G Plus, G-1, graphite
 Product Codes: CH 543, CH532
 Model Code(s) for Fire Extinguishers: None
 Recommended Use: Fire extinguishant for metal fires, not for human or animal drug use.
 Manufacturer: AMEREX CORPORATION
 Internet Address: www.amerex-fire.com
 Address: 7595 Gadsden Highway, P.O. Box 81
 Trussville, AL 35173-0081
 Company Telephone: (205) 655-3271
 E-mail Address: info@amerex-fire.com
 Emergency Contacts: Chemtrec 1(800) 424-9300 or
 (703) 527-3887
 Revised: May, 2016

Section 2. HAZARDS IDENTIFICATION

GHS – Classification

Health	Environmental	Physical
Acute Toxicity: Category 5	None	None
Skin Corrosion/Irritation: NO	None	None
Skin Sensitization: NO	None	None
Eye: Category 2B	None	Warning
STOT – Category 3	None	Warning
Carcinogen: Category None	None	None

GHS – Label Symbol(s):

Exclamation Mark



GHS – Signal Word(s):

Warning

Other Hazards Not Resulting in Classification: None

GHS – Hazard Phrases

GHS Hazard	GHS Codes(s)	Code Phrase(s)
Physical	None	
Health	H303 320 335	May be harmful if swallowed Causes eye irritation May cause respiratory irritation
Environmental	None	
Precautionary:		
General	P101	If medical advice is needed, have product container or label at hand
Prevention	261 264	Avoid breathing dust Wash hands and face thoroughly after handling
Response	P304+340 305+351+313 337+338 312	If inhaled, remove person to fresh air and keep comfortable for breathing. If in eyes, rinse cautiously with water for several minutes. Get immediate medical advice/attention (as appropriate). If eye irritation persists: remove contact lenses, if present and easy to do. Continue rinsing. Call a POISON CENTER/doctor if you feel unwell (as appropriate).
Storage	None	

Section 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	EC No.	REACH Reg. No.	CAS-No.	Weight %	Classification
Graphite	231-955-3	NA	7782-42-5	>99	NA

Emergency overview:

Adverse health effects and symptoms:

Dark gray to black, fine, dry powder, odorless. Moderate irritant to the respiratory system and eyes; mild irritant to mucous membranes and skin. Symptoms of inhalation include coughing, shortness of breath, and production of black sputum. Chronic exposure may cause pneumoconiosis, fibrotic disease, or aggravate existing pulmonary disease.

Cut-off Levels

Chemical Name	Reproductive Toxicity	Carcinogenicity	Mutagenicity	Other Hazard Classes
Graphite	NA	NA	NA	NA

Section 4. FIRST AID MEASURES

Eye Exposure:

Causes irritation. Irrigate eyes with water and repeat until pain free. Seek medical attention if irritation persists, or if visual changes occur.

Skin Exposure:	May cause skin irritation. In case of contact, wash with plenty of soap and water. Seek medical attention if irritation persists.
Inhalation:	May cause irritation, along with coughing and appearance of black sputum. If respiratory irritation or distress occurs, remove victim to fresh air. Seek medical attention if irritation persists.
Ingestion:	Overdose symptoms may include breathing difficulty and coughing up black sputum. If victim is conscious and alert, give 2-3 glasses of water or milk to drink. Do not induce vomiting. Seek immediate medical attention. Do not leave victim unattended. To prevent aspiration of swallowed product, lay victim on side with head lower than waist.
Medical conditions possibly aggravated by exposure:	Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema, or bronchitis. Skin contact may aggravate existing skin disease. Chronic overexposure may cause pneumoconiosis ("dusty lung" disease).

Section 5. FIRE-FIGHTING MEASURES

Flammable Properties:	Not flammable
Flash Point:	Not determined
Suitable Extinguishing Media:	CO2, water spray, dry chemical powder or foam
Hazardous Combustion Products:	May release CO or CO2.
<u>Explosion Data:</u>	
Sensitivity to Mechanical Impact:	Not sensitive
Sensitivity to Static Discharge:	Can conduct electricity or static charge
Unusual fire/explosion hazards:	Airborne dust could be explosive at high concentrations.
Protective Equipment and Precautions for Firefighters:	As in any fire, wear self-contained breathing apparatus pressure-demand. NIOSH (approved or equivalent) and full protective gear.

Section 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Avoid contact with skin, eyes, and clothing. This is a slip hazard; do not walk through spilled material.
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Personal Protective Equipment:	Graphite can become a combustible dust if allowed to become airborne. Wear PPE as specified in Section 8. Sweep up and containerize for disposal or reclamation. Vacuuming or wet sweeping is suggested to avoid dust dispersion.
Emergency Procedures:	Graphite can become a combustible dust if allowed to become airborne.
Methods for Containment:	Prevent further leakage or spillage if safe to do so. Material should be collected mechanically and disposed of in suitable containers.
Methods for Clean Up:	Avoid dust formation. Clean up released material using vacuum or wet sweep and shovel to minimize generation of dust. Bag and drum for disposal; properly label containers.
Environmental Precautions:	Prevent material from entering storm sewers or conveyances to waterways.
Other:	If product is contaminated, use PPE and containment appropriate to the nature of the most toxic chemical/material in the mixture.

Section 7. HANDLING AND STORAGE

Personal Precautions:	Use appropriate PPE when handling or maintaining equipment, and wash thoroughly after handling (see Section 8).
Conditions for Safe Storage/Handling:	Keep product in original container. Prevent falling. Do not allow near heat sources.
Incompatible Products:	Do not mix with other extinguishing agents. Store away from ignition sources and direct sunlight.
Hazardous Decomposition Products:	Carbon oxides, Potassium oxides
Hazardous Polymerization:	Will not occur

Section 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Chemical Name	OSHA PEL	ACGIH TLV	DFG MAK *	EU BLV
Graphite	15 mppcf	2 mg/m ³ (respirable)	4 mg/m ³ (inhalable)	NA

*German regulatory limits. mppcf = millions of particles per cubic foot. All values are 8 hour time weighted average concentrations.

Engineering Controls:

Showers
Eyewash stations
Ventilation systems

Personal Protective Equipment – PPE Code E:

The need for respiratory protection is not probable during short-term exposure. PPE use during production process must be independently evaluated.



Eye/Face Protection:
Skin and Body Protection:
Respiratory Protection:

Chemical goggles
Wear nitrile or similar gloves/coveralls
If exposure limits are exceeded or irritation is experienced, NIOSH approved respiratory protection should be worn. Use P100 respirators for limited exposure, use air-purifying respirator (APR) with high efficiency particulate air (HEPA) filters for prolonged exposure. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current safety and health requirements. The need for respiratory protection is not likely for short-term use in well ventilated areas. Good personal hygiene practice is essential, such as avoiding food, tobacco products, or other hand-to-mouth contact when handling. Wash thoroughly after handling.

Hygiene Measures:

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Dark gray to black, odorless, fine powder. Feels slippery.
Molecular Weight:	12.01gm
Odor:	Odorless
Odor Threshold:	No information available
Decomposition Temperature °C:	No information available
Freezing Point °C:	Not applicable

Initial Boiling Point °C:	Not applicable
Physical State:	Crystalline powder
pH:	Not applicable
Flash Point °C:	None
Autoignition Temperature °C:	None
Boiling Point/Range °C:	Not Applicable
Melting Point/Range °C:	Approximately 3600° C
Flammability:	No, unless as combustible airborne dust
Flammability Limits in Air °C:	Upper – Not Flammable; Lower-Not Flammable
Explosive Properties:	None
Oxidizing Properties:	None
Volatile Component (%vol)	Not Applicable
Evaporation Rate:	Not Applicable
Vapor Density:	Not Applicable
Vapor Pressure:	Not Applicable
Specific gravity:	Approximately 2.26 at 25 C
Solubility:	Insoluble in water
Partition coefficient, K _{OW}	Unknown
Viscosity:	Not Applicable

Section 10. STABILITY AND REACTIVITY

Stability:	Stable
Incompatibles:	Strong oxidizers such as chlorates and nitrates, liquid potassium, peroxides, fluorine, and chlorine trifluoride.
Conditions to Avoid:	Storage or handling near incompatibles. Graphite is a good conductor of electricity; do not allow situations where electrical accidents can occur.
Hazardous Decomposition Products:	None known
Possibility of Hazardous Reactions:	None
Hazardous Polymerization	Does not occur

Section 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure:	Inhalation and eye contact.
Symptoms:	
Immediate:	
Inhalation:	Irritation, coughing.
Eyes:	Mild irritation.
Skin:	Mild irritation.

Delayed: Symptoms appear to be relatively immediate
 Acute Toxicity: Relatively non-toxic.
 Chronic Toxicity:
 Short-term Exposure: None known.
 Long-term Exposure: As with all dusts, pneumoconiosis, or "dusty lung" disease, may result from chronic exposure.

Acute Toxicity Values - Health

Chemical Name	LD50		LC50 (Inhalation)
	Oral	Dermal	
Graphite	>2g/kg (rat)	Non-irritant, rabbit, 4 hour exposure	NA

Reproductive Toxicity: This product's ingredients are not known to have reproductive or teratogenic effects.
 Target Organs and Effects (TOST): Respiratory system (mild irritant).
 This product is a mild irritant to epithelial tissue, (eyes, mucous membranes, skin) and may aggravate dermatitis. No information was found indicating the product causes sensitization.

Other Toxicity Categories

Chemical Name	Germ Cell Mutagenicity	Carcinogenicity	Reproductive	TOST Single Exp	TOST Repeated Exp	Aspiration
Graphite	None	None	None	None	None	None

Section 12. ECOLOGICAL INFORMATION

Ecotoxicity: Non-toxic; however, as a silt it may degrade aquatic habitat.
 Persistence/Degradability: Insoluble in water; degrades slowly via methylation.
 Probability of rapid biodegradation: Est: 0.74 (Rapid)
 Anaerobic biodegradation probability: Est: 0.76 (Rapid)
 Bioaccumulation potential: Low.
 Bioconcentration factor: Est: 2.43 (wet weight)
 Bioaccumulation: Little. Non-soluble.
 Mobility in soil: Poor
 Log Koc: Est. 0.946
 Log Koa: Est: -0.45
 Log Kaw: Est: 1.43

Other Adverse Ecological Effects: No other known effects at this time

Aquatic Toxicity Values – Environment – Research

Chemical Name	Acute (LC50)	Chronic (LC50)
Graphite	N/A	N/A

Aquatic Toxicity Values – Environment – Estimates

Chemical Name	Acute (LC50)	Chronic (LC50)
Graphite	165.54 mg/L Fish 96 hr; 83.95 mg/l Daphnid 48 hr;	39.20 mg/L Gr. Algae 96 hr

Section 13. DISPOSAL CONSIDERATIONS

Safe Handling	Use appropriate PPE when handling, and wash thoroughly after handling (see Section 8).
Waste Disposal Considerations	Dispose in accordance with federal, state, and local regulations.
Contaminated Packaging	Dispose in accordance with federal, state, and local regulations.

NOTES:

This product is not a RCRA characteristically hazardous or listed hazardous waste. Dispose of according to state or local laws, which may be more restrictive than federal laws or regulations. Used product may be altered or contaminated, creating different disposal considerations.

Section 14. TRANSPORT INFORMATION

UN Number:	NA
UN Proper Shipping Name:	NA
Transport Hazard Class:	NA
Packing Group:	NA
Marine Pollutant?:	NO
IATA	Not regulated
DOT	Not regulated

NOTES:

This product is not defined as a hazardous material under U.S. Department of Transportation (DOT) 49 CFR 172, or by Transport Canada "Transportation of Dangerous Goods" regulations.

Section 15. REGULATORY INFORMATION

International Inventory Status: All ingredients are on the following inventories

Country(ies)	Agency	Status
United States of America	TSCA	Yes
Canada	DSL	Yes
Europe	EINECS/ELINCS	Yes
Japan	MITI	No
South Korea	KECL	Yes

REACH Title VII Restrictions: No information available

Chemical Name	Dangerous Substances	Organic Solvents	Harmful Substances Whose Names Are to be Indicated on Label	Pollution Release and Transfer Registry (Class II)	Pollution Release and Transfer Registry (Class I)	Poison and Deleterious Substances Control Law
Graphite	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

Component	ISHA – Harmful Substances Prohibited for Manufacturing, Importing, Transferring, or Supplying	ISHA – Harmful Substances Requiring Permission	Toxic Chemical Classification Listing (TCCL) – Toxic Chemicals	Toxic Release Inventory (TRI) – Group I	Toxic Release Inventory (TRI) – Group II
Graphite	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

European Risk and Safety phrases:

EU Classification:	XN	Irritant
R Phrases:	20 36/37	Harmful by inhalation. Irritating to eyes, respiratory system.
S Phrases:	22 23/24/25 26 36 38	Do not breath dust. Avoid inhalation and contact with skin and eyes In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing. Where ventilation is insufficient, wear suitable respiratory equipment.

U.S. Federal Regulatory Information:

SARA 313:

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) - This product does not contain and chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

None of the chemicals in this product are under SARA reporting requirements or have SARA threshold planning quantities (TPQs) or CERCLA reportable quantities (RQs), or are regulated under TSCA 8(d).

SARA 311/312 Hazard Categories:

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water/Clean Air Acts:

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42) or Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61) and Section 112 of the Clean Air Act Amendments of 1990.

U.S. State Regulatory Information:

Chemicals in this product are covered under specific State regulations, as denoted below:

- Alaska** - Designated Toxic and Hazardous Substances: None
- California** – Permissible Exposure Limits for Chemical Contaminants: None
- Florida** – Substance List: None
- Illinois** – Toxic Substance List: None
- Kansas** – Section 302/303 List: None
- Massachusetts** – Substance List: None
- Minnesota** – List of Hazardous Substances: None
- Missouri** – Employer Information/Toxic Substance List: None
- New Jersey** – Right to Know Hazardous Substance List: None
- North Dakota** – List of Hazardous Chemicals, Reportable Quantities: None
- Pennsylvania** – Hazardous Substance List: None
- Rhode Island** – Hazardous Substance List: None
- Texas** – Hazardous Substance List: None
- West Virginia** – Hazardous Substance List: None
- Wisconsin** – Toxic and Hazardous Substances: None

California Proposition 65: No component is listed on the California Proposition 65 list.

Other:

Mexico – Grade

No component listed

Canada – WHMIS Hazard Class

No component listed

Section 16. OTHER INFORMATION

This SDS conforms to requirements under U.S., U.K., Canadian, Australian, and EU regulations or standards, and conforms to the proposed 2003 ANSI Z400.1 format.

Issuing Date

17-June-2012

Revision Date

4-May-2016

Revision Notes

None

The information herein is given in good faith but no warranty, expressed or implied, is made.
Updated by William F. Garvin, CIH.