1. Identification

Product identifier: GG 225-270N

Other means of identification

- SDS number: 0120
- Synonyms: GrafGuard

Recommended use: GrafGuard® expandable graphite flake is a non-halogenated fire-retardant additive for materials that require improved fire-protection characteristics. It can be found in building materials and automotive applications to meet increasingly stringent fire safety codes. GrafGuard materials also improve the performance of fire-retardant additives such as phosphates, magnesium hydroxide and nitrogen compounds.

Recommended restrictions: Workers (and your customers or users in the case of resale) should be informed of the potential presence of respirable dust as well as its potential hazards. Appropriate training in the proper use and handling of this material should be provided as required under applicable regulations.

Manufacturer/Importer/Supplier/Distributor information

- Company name: NeoGraf Solutions, LLC
- Address: 11709 Madison Avenue, Lakewood, OH 44107, United States of America
- Telephone: +1 216-529-3777
- Contact person: Product Responsibility Manager +1 216-529-3724
- E-mail: info@neograf.com
  Access Code: 333366

2. Hazard(s) identification

Physical hazards: Not classified.

Health hazards: Not classified.

OSHA defined hazards: Not classified.

Label elements

- Hazard symbol: None.
- Signal word: None.
- Hazard statement: The substance does not meet the criteria for classification.

Precautionary statement

- Prevention: Observe good industrial hygiene practices.
- Response: Wash hands after handling.
- Storage: Store away from incompatible materials.
- Disposal: Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC): None known.

Supplemental information: None.

3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulphuric acid, compound with graphite</td>
<td>12777-87-6</td>
<td>80 - 90</td>
</tr>
<tr>
<td>Natural Impurities*</td>
<td>Not Available</td>
<td>10 - 20</td>
</tr>
</tbody>
</table>
**Chemical name** | **CAS number** | **%**
--- | --- | ---
Crystalline silica | 14808-60-7 | 2.1

**Composition comments**

*Third-party analysis found that any naturally occurring Respirable Crystalline Silica (RCS) that may exist as an impurity in this substance is inextricably bound, environmentally unavailable and at de minimis concentration. Thus, in its current and anticipated future physical state, the substance is incapable of causing toxicologically relevant RCS exposure under either normal conditions of use or in case of extreme upset.

All concentrations are in percent by weight.

### 4. First-aid measures

**Inhalation**

In case of inhalation of dust: Move to fresh air. Call a physician if symptoms develop or persist.

**Skin contact**

Wash off with soap and water. Get medical attention if irritation develops and persists.

**Eye contact**

Do not rub eyes. Rinse with water. Get medical attention if irritation develops and persists.

**Ingestion**

Dusts may irritate the respiratory tract, skin and eyes.

**Indication of immediate medical attention and special treatment needed**

Treat symptomatically.

**General information**

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

### 5. Fire-fighting measures

**Suitable extinguishing media**

Foam. Dry chemical powder. Carbon dioxide (CO2).

**Unsuitable extinguishing media**

Do not use water jet as an extinguisher, as this will spread the fire.

**Specific hazards arising from the chemical**

During fire, hazardous combustion products are released that may include: Carbon oxides. Sulphur oxides. Sulfuric acid. Silicon oxide fumes.

**Special protective equipment and precautions for firefighters**

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**Fire fighting equipment/instructions**

In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.

**Specific methods**

Use standard firefighting procedures and consider the hazards of other involved materials.

**General fire hazards**

No unusual fire or explosion hazards noted.

### 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**

Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. For personal protection, see section 8 of the SDS.

Avoid the generation of dusts during clean-up. Collect dust using a vacuum cleaner equipped with HEPA filter. The product is immiscible with water and will spread on the water surface. Stop the flow of material, if this is without risk.

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

Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste container. Following product recovery, flush area with water.

Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal. Clean surface thoroughly to remove residual contamination.

**Environmental precautions**

Avoid discharge into drains, water courses or onto the ground.

### 7. Handling and storage

**Precautions for safe handling**

Minimize dust generation and accumulation. Provide appropriate exhaust ventilation at places where dust is formed. Avoid contact with water and moisture. Avoid prolonged exposure. Observe good industrial hygiene practices.

**Conditions for safe storage, including any incompatibilities**

Store in tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).
8. Exposure controls/personal protection

Occupational exposure limits

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulphuric acid, compound with graphite (CAS 12777-87-6)</td>
<td>PEL</td>
<td>5 mg/m³</td>
<td>Respirable fraction.</td>
</tr>
<tr>
<td>Crystalline silica (CAS 14808-60-7)</td>
<td>TWA</td>
<td>0.05 mg/m³</td>
<td></td>
</tr>
<tr>
<td>US. OSHA Table Z-3 (29 CFR 1910.1000) Components</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crystalline silica (CAS 14808-60-7)</td>
<td>TWA</td>
<td>0.1 mg/m³</td>
<td>Respirable.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.4 mppcf</td>
<td>Respirable.</td>
</tr>
<tr>
<td>ACGIH Components</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulphuric acid, compound with graphite (CAS 12777-87-6)</td>
<td>TWA</td>
<td>3 mg/m³</td>
<td>Respirable particles.</td>
</tr>
<tr>
<td>US. ACGIH Threshold Limit Values Components</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crystalline silica (CAS 14808-60-7)</td>
<td>TWA</td>
<td>0.025 mg/m³</td>
<td>Respirable fraction.</td>
</tr>
<tr>
<td>US. NIOSH: Pocket Guide to Chemical Hazards Components</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crystalline silica (CAS 14808-60-7)</td>
<td>TWA</td>
<td>0.05 mg/m³</td>
<td>Respirable dust.</td>
</tr>
</tbody>
</table>

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection

Wear appropriate chemical resistant gloves. Glove material: Nitrile. Use gloves with breakthrough time of 15 - 120 minutes. Minimum glove thickness 0.1 - 0.3 mm. Other suitable gloves can be recommended by the glove supplier.

Skin protection

Other

Wear suitable protective clothing.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment. Wear respirator with dust filter. Follow OSHA respirator regulations (29CFR 1910.134) and use NIOSH/MSHA approved respirators. Appropriate respirator selection should be made by a qualified professional.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance
Physical state  
Form  
Color  
Odor  
Odor threshold  
pH  
Melting point/freezing point  
Initial boiling point and boiling range  
Flash point  
Evaporation rate  
Flammability (solid, gas)  
Upper/lower flammability or explosive limits  
Explosive limit - lower (%)  
Explosive limit - upper (%)  
Vapor pressure  
Vapor density  
Relative density  
Solubility(ies)  
Partition coefficient (n-octanol/water)  
Auto-ignition temperature  
Decomposition temperature  
Viscosity  
Other information  
Density  
Explosive properties  
Kinematic viscosity  
Oxidizing properties  
Particle size  

10. Stability and reactivity

Reactivity  
Chemical stability  
Possibility of hazardous reactions  
Conditions to avoid  
Incompatible materials  
Hazardous decomposition products  

11. Toxicological information

Information on likely routes of exposure  
Inhalation  
Skin contact  
Eye contact  
Ingestion  
Symptoms related to the physical, chemical and toxicological characteristics  

Information on toxicological effects
### Acute toxicity

Not expected to be acutely toxic.

<table>
<thead>
<tr>
<th>Components</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crystalline silica (CAS 14808-60-7)</td>
<td></td>
</tr>
</tbody>
</table>

### Chronic

**Inhalation**

| LOEC | Human | 0.0563 mg/m³ |

### Skin corrosion/irritation

May cause irritation through mechanical abrasion.

### Serious eye damage/eye irritation

Dust or powder may cause mechanical eye irritation.

### Respiratory or skin sensitization

- **Respiratory sensitization**
  - Not a respiratory sensitizer.

- **Skin sensitization**
  - This product is not expected to cause skin sensitization.

### Germ cell mutagenicity

No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

### Carcinogenicity

- Not classifiable as to carcinogenicity to humans.

  - **IARC Monographs. Overall Evaluation of Carcinogenicity**
    - Crystalline silica (CAS 14808-60-7) 1 Carcinogenic to humans.

  - **NTP Report on Carcinogens**
    - Crystalline silica (CAS 14808-60-7) Known To Be Human Carcinogen.

    - Crystalline silica (CAS 14808-60-7) Cancer

### Reproductive toxicity

This product is not expected to cause reproductive or developmental effects.

### Specific target organ toxicity - single exposure

Not classified.

### Specific target organ toxicity - repeated exposure

Not classified.

### Aspiration hazard

Not relevant, due to the form of the product.

### Chronic effects

Prolonged inhalation may be harmful.

### 12. Ecological information

**Ecotoxicity**

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

**Persistence and degradability**

No data is available on the degradability of this substance.

**Bioaccumulative potential**

No data available on bioaccumulation.

**Mobility in soil**

The product is insoluble in water. Not expected to be mobile in soil.

**Other adverse effects**

No data available for this product.

### 13. Disposal considerations

**Disposal instructions**

Collect and reclaim or dispose in sealed containers at licensed waste disposal site.

**Local disposal regulations**

Dispose in accordance with all applicable regulations.

**Hazardous waste code**

The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**Waste from residues / unused products**

Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Contaminated packaging**

Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

### 14. Transport information

**DOT**

Not regulated as dangerous goods.

**IATA**

Not regulated as dangerous goods.
IMDG
Not regulated as dangerous goods.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

15. Regulatory information

US federal regulations
This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)
Not listed.

SARA 304 Emergency release notification
Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)
Crystalline silica (CAS 14808-60-7)
Cancer
lung effects
immune system effects
kidney effects

Toxic Substances Control Act (TSCA)
This substance is on the TSCA 8(b) inventory and is designated “active”.

Superfund Amendments and Reauthorization Act of 1986 (SARA)
SARA 302 Extremely hazardous substance
Not listed.

SARA 311/312 Hazardous chemical
No

SARA 313 (TRI reporting)
Not regulated.

Other federal regulations
Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated.

Safe Drinking Water Act (SDWA)
Not regulated.

US state regulations
US. Massachusetts RTK - Substance List
Crystalline silica (CAS 14808-60-7)

US. New Jersey Worker and Community Right-to-Know Act
Crystalline silica (CAS 14808-60-7)

US. Pennsylvania Worker and Community Right-to-Know Law
Crystalline silica (CAS 14808-60-7)

US. Rhode Island RTK
Crystalline silica (CAS 14808-60-7)

California Proposition 65
WARNING: Cancer - www.P65Warnings.ca.gov.

California Proposition 65 - CRT: Listed date/Carcinogenic substance
Crystalline silica (CAS 14808-60-7) Listed: October 1, 1988

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))
Crystalline silica (CAS 14808-60-7)
### International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Industrial Chemicals (AICIS)</td>
<td>No</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>No</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>No</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>No</td>
</tr>
<tr>
<td>Taiwan</td>
<td>Taiwan Chemical Substance Inventory (TCSI)</td>
<td>Yes</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s) A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

### 16. Other information, including date of preparation or last revision

- **Issue date**: 14-October-2022
- **Revision date**: -
- **Version #**: 01
- **NFPA ratings**

![NFPA ratings](image)

**Disclaimer**

NeoGraf Solutions cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user’s responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.