1. Identification of the substance or mixture and of the company

1.1 Product identifier

Substance name/Trade name: Natural Graphite

Identification numbers:

EG-No.: 231-955-3
CAS-No.: 7782-42-5
REACH registration number not yet granted

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses of the substance or mixture:

Electrical and thermal conductive additive
Friction modifier
Carbon carrier
Lubricant
Pencil
Refractories

Uses advised against:

None known

1.3 Details of the supplier of the safety data sheet

Producer / Supplier:

ProGraphite GmbH
Dr.-Schindler-Str. 9
94107 Untergriesbach
Germany
Telefon +49 (0)8593 9383 188
Mobil +49 (0)160 7586 976
info@pro-graphite.com

1.4 Emergency telephone number

+49 (0)8593 9383 188
+49 (0)160 7586 976

Monday to Friday: 8:00 – 18:00 h

2. Hazards identification

2.1 Classification of the substance or mixture

This product does not meet the classification and labelling criteria given in the Regulation (EC) No 1272/2008 (CLP). This product does not meet the classification and labelling criteria given in the Dangerous Preparations Directive 67/548/EC (DSD).
2.2 Label elements
Not relevant

2.3 Other Hazards
Slightly irritating on inhalation, skin and eye contact. Further hazards unknown.

Additional hazard notes for human and environment:

Possible harmful physico-chemical effect:
Risk of creation of ignitable mixture unlikely for flake graphite but possible in case of dust generation or during handling of fine-grained powder.

Possible harmful effect on human and related symptoms:
Possibility of minor irritation phenomena of skin and mucosa, due to mechanical effect.

3. Composition/information on ingredients

3.1 Substances

Chemical characterization:
Substance name: Natural Graphite
Chemical characterisation: Graphitic carbon

Identification numbers:
EG-No.: 231-955-3
CAS-No.: 7782-42-5
REACH registration number not yet granted

3.2 Mixtures
Not applicable. The product is not a mixture

4. First aid measures

4.1 Description of first aid measures

General information:
In case of persisting symptoms and adverse effects, consult a physician. In case of unconsciousness, handling and transport in recovery position.

After inhalation:
Remove affected person from the immediate area. Ensure supply of fresh air and respiration.
After skin contact:
Clean affected skin with plenty of water and soap.

After eye contact:
Wash the eyes with running water. Consult an ophthalmologist if adverse symptoms persist.

After ingestion:
Rinse out mouth with water. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed
Most important symptoms are listed in section 11.

4.3 Indication of any immediate medical attention and special treatment needed
No data available

5. Firefighting measures

5.1 Extinguishing media
Water spray jet, extinguishing powder, alcohol-resistant foam, sand, carbon dioxide.

5.2 Special hazards arising from the substance or mixture
In the event of fire, the following can be released: Carbon monoxide (CO); Carbon dioxide (CO₂).

5.3 Advice for firefighters
Use self-contained breathing apparatus if necessary.

5.4 Additional information
No data available

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel:
Avoid dust formation. Avoid inhalation of vapour and dust. Avoid contact with skin, eyes and clothing. High risk of slipping due to leakage/spillage of product.

For emergency responders:
Personal protective equipment (PPE) - see Section 8. In case of emergency, use of personal protective equipment [DIN EN 469, EN 12021].

6.2 Environmental precautions
No data available
6.3 Methods and material for containment and cleaning up
  Sweep up or use a suitable vacuum cleaner.

6.4 Reference to other sections
  No data available

7. Handling and storage

7.1 Precautions for safe handling
  Avoid inhalation of dust, contact with eyes, skin and clothing. Avoid prolonged or repeated exposition. Provide good ventilation of working area (local exhaust ventilation, if necessary). If workplace exposure limits are exceeded, respiratory protection approved for the particular job must be worn.

  General protective and hygiene measures:
  In case of dust generation at workplace, use local exhaust ventilation. Avoid inhalation of dust, contact of material with eyes, skin and clothing as well as prolonged or repeated exposition.

  Advice on protection against fire and explosion:
  Substance is combustible. Fire extinguishing installations are to be hold available. Avoid dust generation. Dust should be aspirated immediately on the spot. Avoid electrostatic charging.

7.2 Conditions for safe storage, including any incompatibilities

  Technical measures and storage conditions
  Keep container tightly closed, protected from light and dry.
  Keep in a dry place with good ventilation.
  Storage category (TRGS 510): combustible solids

7.3 Specific end uses
  No data available

8. Exposure controls/personal protection

8.1 Control parameters
8.1.1 Occupational exposure limit values

<table>
<thead>
<tr>
<th>Substance</th>
<th>EG-No.</th>
<th>CAS-No.</th>
<th>Threshold</th>
<th>Time-weighted average per work shift</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graphite</td>
<td>231-955-3</td>
<td>7782-42-5</td>
<td>General dust emission threshold according to TRGS 900</td>
<td>1.25 mg/m³ A 10 mg/m³ E</td>
<td>E-Fraction: exceedance factor 2, 15 min, 1x per work shift *</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>A-Fraction: exceedance factor 8, 15 min, 4x per work shift *</td>
</tr>
</tbody>
</table>

Graphite CAS No. 7782-42-5 TRGS 900 - Threshold
Remarks:
General dust emission threshold (Germany).

8.1.2 DNEL- und PNEC- values

Not applicable

8.2 Exposure controls

8.2.1 Technical measures for exposure control
Processing and handling in closed facility, if possible. Ensure good ventilation of workplace.
Aspiration of dust right at point of origin.

8.2.2 Individual measures for exposure control - Personal protective equipment

**Respiratory protection:**
In case of dust exposure, a respiration protection (respiration filter mask type P1 (EN 143)) must be worn. Use respiratory masks and components tested and approved under government standards such as NIOSH (US) or CEN (EU).

**Eye / face protection:**
In case of dust exposure use safety glasses with integrated side protection shield according to DIN (EN 166). Only use safety glasses or other eye protection equipment tested and approved under government standards such as NIOSH (US) or CEN (EU).

**Hand protection:**
The use of safety gloves complying with directive 89/686/EWG and European Standard EN 374 is advised in the event of frequent skin contact with the product. Recommended safety gloves, e.g., nitrile rubber, 0.11mm thickness, breakthrough time of 480 minutes.

**Body protection:**
No additional requirements.

**Workplace hygiene:**
Avoid inhalation of dust.
8.2.3 Environmental exposure controls

Do not discharge into the drains/surface waters/groundwater.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Physical state</td>
<td>solid</td>
</tr>
<tr>
<td>b) Appearance/form</td>
<td>flaky to rounded particles</td>
</tr>
<tr>
<td>c) Odour</td>
<td>odourless</td>
</tr>
<tr>
<td>d) Geruchsschwelle</td>
<td>No data available</td>
</tr>
<tr>
<td>e) pH-value</td>
<td>neutral</td>
</tr>
<tr>
<td>f) Melting point</td>
<td>Melting range 3652-3697°C (lit.)</td>
</tr>
<tr>
<td>g) Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>h) Flashpoint</td>
<td>No data available</td>
</tr>
<tr>
<td>i) Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>j) Flammability</td>
<td>No data available</td>
</tr>
<tr>
<td>k) Upper and lower explosion limit</td>
<td>No data available</td>
</tr>
<tr>
<td>l) Vapour pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>m) Vapour density</td>
<td>No data available</td>
</tr>
<tr>
<td>n) Density</td>
<td>2.26 g/cm³</td>
</tr>
<tr>
<td>o) Water solubility</td>
<td>Slightly soluble</td>
</tr>
<tr>
<td>p) Distribution coefficient n-Octanol/Water</td>
<td>No data available</td>
</tr>
<tr>
<td>q) Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>r) Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>s) Viscosity</td>
<td>No data available</td>
</tr>
<tr>
<td>t) Explosive properties</td>
<td>Dust ST1</td>
</tr>
<tr>
<td>u) Oxidising properties</td>
<td>No data available</td>
</tr>
</tbody>
</table>

9.2 Other information
No further information of security relevant parameters necessary.

10. Stability and reactivity

10.1 Reactivity:
No data available

10.2 Stability:
Stable under recommended storage conditions.

10.3 Possibility of hazardous reaction:
No data available

10.4 Conditions to be avoided:
Very high temperatures.
10.5 Incompatible materials:
Strong oxidants

10.6 Hazardous decomposition products:
Carbon oxides by heating in air/oxygen.

11. Toxicological information

11.1 Information on toxicological effects

**Acute oral toxicity:**
LD50 oral - rat - female - > 2.000 mg/kg
Method: OECD 423
LC50 inhalation – rat – male and female – 4h – 2.000 mg/m³

**Skin corrosion/irritation:**
Species: rabbit
Result: No irritation
Method: OECD 404

**Serious eye damage/eye irritation:**
Species: rabbit
Result: No irritation
Method: OECD 405

**Respiratory or skin sensitization:**
Species: mouse
Result: non-sensitizing
Method: OECD 429

**Germ cell mutagenicity:**
**Test type:** bacterial reverse mutation
S. typhimurium
Result: negative

**Carcinogenicity:**
According to U.S. National Institute of Health (NTP): quartz-containing natural graphite could possibly have a carcinogenic effect on human.

**Repriduction toxicity:**
No data available

11.2 Additional information
High dust concentrations of natural graphite can cause respiratory problems in case of prolonged
12. Ecological Information

12.1 Toxicity

Toxicity to fish (acute)
LC50: >100 mg/l
Duration of exposure: 96h
Species: Danio rerio
Method: OECD 203

Toxicity to fish (chronic)
No data available

Toxicity to Daphnia (acute)
EC50: >100 mg/l
Duration of exposure: 48h
Species: Daphnia magna
Method: OECD 202
Statischer Test EC50 - Daphnia magna (Großer Wasserfloh) - > 100 mg/l – 48 h

Toxicity to Daphnia (chronic)
No data available

Toxicity to algae (acute)
EC50: >100mg/l
Duration of exposure: 72h
Species: Pseudokirchneriella subcapitata
Method: OECD 201

Toxicity to algae (chronic)
No data available

12.2 Persistence and degradability
No data available

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
This product/mixture does not contain components in concentrations of 0.1% or above and classified as PBT or vPvB
12.6 Other adverse effects
No data available

12.7 Other information:
Natural graphite is a chemically inert material which is not harmful to the environment.

13. Disposal considerations

13.1 Water treatment methods
Produkt
Residues have to be disposed of in accordance with the regulations for waste removal and in agreement with a designated disposal company.

Packaging
Dispose of as unused product

14. Transport information

The product is not subject to ADR/GGVS/RID/GGVE/ICAO/IATA/IDMG regulations.

14.1 UN-Number
ADR/RID: - IMDG: - IATA: -

14.2 Regular UN shipping name
ADR/RID/IMDG/IATA: - no dangerous goods

14.3 Transport hazard class
ADR/RID/IMDG/IATA: - no dangerous goods

14.4 Packaging group
ADR/RID: - IMDG: - IATA: -

14.5 Environmental hazards
ADR/RID: - IMDG Marine pollutant: - IATA: -

14.6 Special precautions for user
No data available

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code
Not relevant

15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
Non-hazardous to water

15.1.1 Chemical safety assessment according to directive EG 1907/2006 (REACH)
A chemical safety assessment (CSA) according to REACH is not yet available for graphite.
15.1.2 Classification and labelling according to EU directive 67/548/EWG und 1999/45/EG: 
The substance is not subject to classification.

15.1.3 Hazard symbols, Hazard- and Precautionary statements 
Not applicable

15.1.4 Special labelling of particular preparations / Hazard-determining components of labelling 
Not applicable

15.1.5 Approval and/or restrictions on use 
Not applicable

15.1.6 Other EU regulations 
Not applicable

15.1.7 Other requirements, restrictions and prohibitions 
Not applicable

16. Other information

Changes in this version compared to the previous one
Translation and editorial revision

Data sources
- Hommel interaktiv
- Gefahrstoffinformationssystem der gewerbl. BG (GESTIS)
- CRC Handbook of Chemistry and Physics
- MSDS of other producers
- Ullmann: Technische Chemie

Training for employees
No specific training on graphite needed. General training on processing, handling and storage of dusty materials sufficient.
Further information

Issuer of safety data sheet and contact
ProGraphite GmbH
Dr.-Schindler-Str. 9
94107 Untergriesbach
Germany

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Mobile +49 (0)160 7586 976
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Important note

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