EC safety data sheet according to Regulation (EG) Nr. 1907/2006 (changed by EU (EU) Nr. 453/2010)

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ProGraphite
PROFESSIONAL GRAPHITE SOLUTIONS

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

1.1 Product identifier

Substance name/Trade name: Expandable Graphite

Identification numbers:

CAS-No.: 12777-87-6
EG-No.: 235-819-4
REACH registration number: No registration number available for this substance as the substance or its use are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

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

Relevant identified uses of the substance or mixture:
Fire-retardant additive
Basic material for fabrication of other substances and products

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
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) or national regulations. This product does not meet the classification and labelling criteria given in the Dangerous Preparations Directive 67/548/EC (DSD).

2.2 Label elements
No labelling required

2.3 Other Hazards
No data available

Additional hazard notes for human and environment:

Possible harmful physico-chemical effect:
Contact with water can lead to emission of small quantities of sulfuric acid out of the product. Danger of release of caustic and harmful gases and vapours when heated.

Possible harmful effect on human and related symptoms:
Possibility of minor irritation phenomena of skin and mucosa after contact of substance with skin or eyes.

3. Composition/information on ingredients

3.1 Substances

Chemical characterization:
Substance name: Expandable Graphite
Chemical characterisation: Natural Graphite with intercalation of sulfuric acid

Ingredients		Classification		Concentration
Graphite with sulfuric acid-compound				
CAS-No.	12777-87-6	EU Directive No. 1272/2008:	not classified	(90-99%)
EG-No.	235-819-4	Directive 67/548/EWG:	not classified	

REACH registration number: No registration number available for this substance as the substance or its use are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

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. Artificial respiration on respiratory arrest. Seek medical advice.

After skin contact:
Clean affected skin with plenty of water and soap. In case of any symptoms, seek medical advice.

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

After ingestion:
Rinse out mouth with water. Seek medical advice. 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, extinguishing powder, alcohol-resistant foam, carbon dioxide.

5.2 Special hazards arising from the substance or mixture
In the event of fire, the following can be released: vapours of sulphur oxides, carbon oxides.

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

5.4 Additional information
No data available

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Avoid dust formation. Avoid inhalation of vapour, gases and dust. Avoid contact with skin, eyes and clothing. Wear suitable protective clothing (see section 8 – personal protection equipment).

6.2 Environmental precautions

Prevent any intrusion into sewerage, surface water, groundwater.

6.3 Methods and material for containment and cleaning up

Remove any spilled product by sweeping up or using a suitable vacuum cleaner. Avoid dust formation. Give residues into suitable closed container for disposal.

7. Handling and storage

7.1 Precautions for safe handling

Avoid any dust formation. 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).

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. Keep away from heat and sources of ignition.

7.2 Conditions for safe storage, including any incompatibilities

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

7.3 Specific end uses

No data available

8.1 Control parameters

8.1.1 Occupational exposure limit values

Substance	EG-No.	CAS-No.	Threshold	Time-weighted average per work shift	Remarks
Expandable Graphite	235-819-4	12777-87-6	General dust emission threshold according to TRGS 900	1,25 mg/m³ A 10 mg/m³ E	E-Fraction: exceedance factor 2, 15 min, 1x per work shift * A-Fraction: exceedance factor 8, 15 min, 4x per work shift *

E= inhalable dust; A= alveolar dust
*total threshold limit per work shift (time-weighted average) cannot be exceeded during a shift.
Expandable Graphite CAS No. 12777-87-6 TRGS 900 – Threshold

Remarks: General dust emission threshold (Germany). No specific threshold.

8.1.2 DNEL- und PNEC- values

Not applicable

8.2 Exposure controls

8.2.1 Technical measures for exposure control

General industrial hygiene practice. The usual precautions for handling chemicals should be taken. 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:
Use appropriate safety gloves complying with directive 89/686/EWG and European Standard EN 374 if there is any risk of skin contact with the product.

Body protection:
No additional requirements.

Workplace hygiene:
Avoid any inhalation of dust.

8.2.3 Environmental exposure controls

Prevent any discharge into the sewerage/surface waters/groundwater.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Physical state	solid
b) Appearance/colour	flaky particles, grey
c) Odour	No data available
d) Geruchsschwelle	No data available
e) pH-value	Neutral to slightly acidic
f) Melting point	Melting range 3652-3697°C (lit.)
g) Boiling point	No data available
h) Flashpoint	No data available
i) Evaporation rate	No data available
j) Flammability	No data available
k) Upper and lower explosion limit	No data available
l) Vapour pressure	No data available
m) Vapour density	No data available
n) Density	No data available
o) Water solubility	No data avaiable
p) Distribution coefficient n-Octanol/Water	No data available
q) Auto-ignition temperature	No data available
r) Decomposition temperature	No data available
s) Viscosity	No data available
t) Explosive properties	No data available
u) Oxidising properties	No data available

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 and sulphur oxides by heating in air/oxygen.

11. Toxicological information

11.1 Information on toxicological effects

Acute oral toxicity:
LD50 oral - rat - 2.000 mg/kg
Method: OECD 423
LC50 inhalation – no data – missing endpoint
Method: OECD 403
LC50 dermal – rat - >2.000 mg/kg
Method: OECD 402

Skin corrosion/irritation:
Species: rat
Result: No irritation
Method: OECD 402

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

Respiratory or skin sensitization:
In case of substance use and exposition in accordance with intended use, respiratory or skin sensitisation unlikely, due to lipophobe properties of the constituents.

Germ cell mutagenicity:
Test type: Ames
S. typhimurium
Result: negative
Method: OECD 471

In vitro mammal cells
Result: negative
Method: OECD 487

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

Repriduction toxicity:
NOAEL – rat – 12.000 mg/kg
Method: OECD 422
LOAEC – mouse – 19.3 mg/cm^3
LOAEC – rabbit – 5.7 mg/cm^3
Method: OECD 414

NOAEL: no observed adverse effect level
LOAEC: lowest observed adverse effect concentration

11.2 Additional information

High dust concentrations of natural graphite can cause respiratory problems in case of prolonged inhalation. Chronic exposition to quartz-containing natural graphite could support the development of silicosis.

12. Ecological Information

12.1 Toxicity
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

13. Disposal considerations

13.1 Waste 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.

Contaminated 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

15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

German water hazard classification: WGK 1 slightly hazardous to water (self-assessment)

15.1.1 Chemical safety assessment according to directive EG 1907/2006 (REACH)
A chemical safety assessment (CSA) is not available.

15.1.2 Classification and labelling according to EU directives 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

Further information

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