

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

Current version: 2.0  
Issued: 20.03.2024  
Replaced version: 1.4  
Issued: 01.03.2023



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

**1.1 Product identifier**

**Substance name/Trade name:** Synthetic 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  
Carbon Brushes

**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

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**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**

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Not relevant

## 2.3 Other Hazards

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

### Possible harmful effect on human and related symptoms:

Possibility of minor irritation phenomena of skin and mucosa, due to mechanical effect.

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## 3. Composition/information on ingredients

### 3.1 Substances

#### Chemical characterization:

Substance name: Synthetic Graphite

Chemical characterisation: Graphitic carbon (>98%)

#### 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

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## 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.

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## After ingestion:

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

## 4.2 Indication of any immediate medical attention and special treatment needed

No data available

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## 5. Firefighting measures

### 5.1 Extinguishing media

Water spray jet, extinguishing powder, 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 (CO<sub>2</sub>).

### 5.3 Advice for firefighters

Use self-contained breathing apparatus if necessary.

### 5.4 Additional information

No data available

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## 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

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## **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.

### **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.

### **7.3 Specific end uses**

No data available

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## **8. Exposure controls/personal protection**

### **8.1 Control parameters**

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## 8.1.1 Occupational exposure limit values

| Substance | EG-No.    | CAS-No.   | Threshold   | Time-weighted average per work shift               | Remarks  |
|-----------|-----------|-----------|---|--|--|
| Graphite  | 231-955-3 | 7782-42-5 | General dust emission threshold according to TRGS 900 | 1,25 mg/m <sup>3</sup> A<br>10 mg/m <sup>3</sup> E | E-Fraction: exceedance factor 2, 15 min, 1x per work shift *<br>A-Fraction: exceedance factor 8, 15 min, 4x per work shift * |

Graphite CAS No. 7782-42-5 TRGS 900 - Threshold

Remarks:

General dust emission threshold (Germany).

TLV (Threshold Limit value) = 10mg/m<sup>3</sup>

PEL (Personal Exposure Limit) = 15mg/m<sup>3</sup>

## 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.

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### 8.2.3 Environmental exposure controls

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

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## 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

|   |                                  |
|---|----------------------------------|
| a) Physical state                           | solid                            |
| b) Appearance/form                          | Powders or granular pieces       |
| c) Odour                                    | odourless                        |
| d) Geruchsschwelle                          | No data available                |
| e) pH-value                                 | neutral                          |
| 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                                  | 2.26 g/cm <sup>3</sup>           |
| o) Water solubility                         | Slightly soluble                 |
| 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                     | Dust ST1                         |
| u) Oxidising properties                     | No data available                |

### 9.2 Other information

No further information of security relevant parameters necessary.

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## 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:

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Very high temperatures.

**10.5 Incompatible materials:**

Strong oxidants

**10.6 Hazardous decomposition products:**

Carbon oxides by heating in air/oxygen.

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**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/m<sup>3</sup>

**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

**Reproduction toxicity:**

No data available

**11.2 Additional information**

High dust concentrations of graphite can cause respiratory problems in case of prolonged inhalation.

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## **12. Ecological Information**

### **12.1 Other adverse effects**

No data available

### **12.2 Other information:**

Synthetic graphite is a chemically inert material which is not harmful to the environment.

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## **13. Disposal considerations**

### **13.1 Water treatment methods**

#### **Product**

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

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## **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

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## **15. Regulatory information**

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

Non-hazardous to water



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## 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

### Synthetic Graphite is listed in the following inventories of chemicals:

- Australian Inventory of Chemical Substances (AICS)
- Canadian Domestic Substances List (DCL)
- Chinese Inventory of Existing Chemical Substances Imported in China (IECSC)
- European Inventory of Existing Chemical Substances (EINECS)
- Japanese Existing and New Chemical Substances (ENCS)
- Korean Existing Chemical List (KECL)
- Philippines Inventory of Chemicals and Chemical Substances (PICCS)
- U.S. Toxic Substances Control Act (TSCA)

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## 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

Telephone +49 (0)8593 9383 188  
Mobile +49 (0)160 7586 976  
info@pro-graphite.com

## Important note

This information is based and compiled on our current state of knowledge and experience. We do not claim the information contained in this safety data sheet to be complete. The reader and user should understand the contained information as a guideline.

ProGraphite GmbH explicitly excludes any liability for any damage or adverse effect which may occur during handling of or contact with the material.

It is the customer's responsibility to ensure that the product is suitable for use within its own process and to ensure that a suitable risk assessment has been conducted with regard to the use of our product.