

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

Product form	: Substance
Substance name	: CARBON
Chemical name	: Carbon ; Activated carbon
EC-No.	: 215-609-9
CAS-No.	: 7440-44-0
Product code	: B1043, B1054, B1065, B1111, B1517, B1651, B1652, B1653, B1655, B1656, B1725, B4009
Product group	: End product

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

#### 1.2.1. Relevant identified uses

Main use category	: Professional use
Use of the substance/mixture	: Laboratory chemicals
Function or use category	: Laboratory chemicals

#### 1.2.2. Uses advised against

No additional information available

### 1.3. Details of the supplier of the safety data sheet

Elemental Microanalysis Ltd  
1 Hameldown Road  
Okehampton – Devon EX20 1UB  
GB United Kingdom  
T +44 1837 54446  
[enquiries@microanalysis.co.uk](mailto:enquiries@microanalysis.co.uk) - <https://www.elementalmicroanalysis.com/>

### 1.4. Emergency telephone number

Emergency number : +44 (0) 7990 767375

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flammable solids, Category 1 H228  
Full text of H- and EUH-statements: see section 16

#### Adverse physicochemical, human health and environmental effects

Flammable solid.

### 2.2. Label elements

#### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS02

Signal word (CLP) : Danger  
Hazard statements (CLP) : H228 - Flammable solid.  
Precautionary statements (CLP) : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.  
No smoking.

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according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

### 2.3. Other hazards

Contains no PBT and/or vPvB substances  $\geq 0.1\%$  assessed in accordance with REACH Annex XIII

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Name : CARBON  
CAS-No. : 7440-44-0  
EC-No. : 215-609-9

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
CARBON	CAS-No.: 7440-44-0 EC-No.: 215-609-9	100	Flam. Sol. 1, H228

Full text of H- and EUH-statements: see section 16

### 3.2. Mixtures

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.  
First-aid measures after skin contact : Wash skin with plenty of water.  
First-aid measures after eye contact : Rinse eyes with water as a precaution.  
First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

### 4.2. Most important symptoms and effects, both acute and delayed

No additional information available

### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam.

### 5.2. Special hazards arising from the substance or mixture

Fire hazard : Flammable solid.  
Hazardous decomposition products in case of fire : Toxic fumes may be released.

### 5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

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### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### 6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. No open flames, no sparks, and no smoking.

##### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

#### 6.2. Environmental precautions

Avoid release to the environment.

#### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Mechanically recover the product. Notify authorities if product enters sewers or public waters.

Other information : Dispose of materials or solid residues at an authorized site.

#### 6.4. Reference to other sections

For further information refer to section 13.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

#### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Ground/bond container and receiving equipment.

Storage conditions : Keep cool. Protect from sunlight. Keep away from ignition sources. Store in a well-ventilated place.

#### 7.3. Specific end use(s)

No additional information available

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### 8.1.1 National occupational exposure and biological limit values

CARBON (7440-44-0)	
United Kingdom - Occupational Exposure Limits	
Local name	Graphite
WEL TWA (OEL TWA) [1]	10 mg/m <sup>3</sup> inhalable dust 4 mg/m <sup>3</sup> respirable
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
CARBON (7440-44-0)	
United Kingdom - Occupational Exposure Limits	
Local name	Graphite

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CARBON (7440-44-0)	
WEL TWA (OEL TWA) [1]	10 mg/m <sup>3</sup> inhalable dust 4 mg/m <sup>3</sup> respirable
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

### 8.1.2. Recommended monitoring procedures

No additional information available

### 8.1.3. Air contaminants formed

No additional information available

### 8.1.4. DNEL and PNEC

No additional information available

### 8.1.5. Control banding

No additional information available

## 8.2. Exposure controls

### 8.2.1. Appropriate engineering controls

#### Appropriate engineering controls:

Ensure good ventilation of the work station.

### 8.2.2. Personal protection equipment

#### Personal protective equipment symbol(s):



#### 8.2.2.1. Eye and face protection

##### Eye protection:

Safety glasses

#### 8.2.2.2. Skin protection

##### Skin and body protection:

Wear suitable protective clothing

##### Hand protection:

Protective gloves

#### 8.2.2.3. Respiratory protection

##### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

#### 8.2.2.4. Thermal hazards

No additional information available

### 8.2.3. Environmental exposure controls

#### Environmental exposure controls:

Avoid release to the environment.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Solid
Colour	: Black.
Molecular mass	: 12.011 g/mol
Odour	: odourless.

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according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

Odour threshold	: Not available
Melting point	: > 3500 °C Source: International Chemical Safety Cards
Freezing point	: Not applicable
Boiling point	: > 4000 °C Source: International Chemical Safety Cards
Flammability	: Flammable solid.
Explosive limits	: Not applicable
Lower explosion limit	: Not applicable
Upper explosion limit	: Not applicable
Flash point	: Not applicable
Auto-ignition temperature	: 400 °C Source: International Uniform Chemical Information Database
Decomposition temperature	: Not available
pH	: 6.0-9 40 g/l at 25 °
pH solution	: Not available
Viscosity, kinematic	: Not applicable
Solubility	: Water: 2610 mg/l at 25°C Source: Quantitative Structure Activity Relation
Partition coefficient n-octanol/water (Log Kow)	: Not available
Partition coefficient n-octanol/water (Log Pow)	: 0.78 Source: Quantitative Structure Activity Relation
Vapour pressure	: 1 mm Hg at 3586°C Source: National Library of Medicine
Vapour pressure at 50°C	: Not available
Density	: Not available
Relative density	: 1.8 Source: International Chemical Safety Cards
Relative vapour density at 20°C	: <0.01hPa at 20 °C
Particle size	: Not available

### 9.2. Other information

#### 9.2.1. Information with regard to physical hazard classes

No additional information available

#### 9.2.2. Other safety characteristics

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Flammable solid.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

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### CARBON (7440-44-0)

LD50 oral rat	> 10000 mg/kg Source: International Uniform Chemical Information Database
LC50 Inhalation - Rat (Vapours)	> 64.4 mg/l

### CARBON (7440-44-0)

LD50 oral rat	> 10000 mg/kg Source: International Uniform Chemical Information Database
LC50 Inhalation - Rat (Vapours)	> 64.4 mg/l

Skin corrosion/irritation	: Not classified pH: 6.0-9 40 g/l at 25 °
Serious eye damage/irritation	: Not classified pH: 6.0-9 40 g/l at 25 °
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

### CARBON (7440-44-0)

Viscosity, kinematic	Not applicable
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## 11.2. Information on other hazards

No additional information available

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified
Not rapidly degradable	

### CARBON (7440-44-0)

LC50 - Fish [1]	5600 mg/l
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### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

### CARBON (7440-44-0)

Partition coefficient n-octanol/water (Log Pow)	0.78 Source: Quantitative Structure Activity Relation
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### CARBON (7440-44-0)

Partition coefficient n-octanol/water (Log Pow)	0.78 Source: Quantitative Structure Activity Relation
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### 12.4. Mobility in soil

No additional information available

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### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Endocrine disrupting properties

No additional information available

### 12.7. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste treatment methods

HP Code

: Dispose of contents/container in accordance with licensed collector's sorting instructions.

: HP3 - "Flammable:"

– flammable liquid waste: liquid waste having a flash point below 60 °C or waste gas oil, diesel and light heating oils having a flash point > 55 °C and ≤ 75 °C;

– flammable pyrophoric liquid and solid waste: solid or liquid waste which, even in small quantities, is liable to ignite within five minutes after coming into contact with air;

– flammable solid waste: solid waste which is readily combustible or may cause or contribute to fire through friction;

– flammable gaseous waste: gaseous waste which is flammable in air at 20 °C and a standard pressure of 101.3 kPa;

– water reactive waste: waste which, in contact with water, emits flammable gases in dangerous quantities;

– other flammable waste: flammable aerosols, flammable self-heating waste, flammable organic peroxides and flammable self-reactive waste.

## SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number or ID number</b>				
UN 1325	UN 1325	UN 1325	UN 1325	UN 1325
<b>14.2. UN proper shipping name</b>				
FLAMMABLE SOLID, ORGANIC, N.O.S. (CARBON)	FLAMMABLE SOLID, ORGANIC, N.O.S. (CARBON)	Flammable solid, organic, n.o.s. (CARBON)	FLAMMABLE SOLID, ORGANIC, N.O.S. (CARBON)	FLAMMABLE SOLID, ORGANIC, N.O.S. (CARBON)
<b>Transport document description</b>				
UN 1325 FLAMMABLE SOLID, ORGANIC, N.O.S. (CARBON), 4.1, II, (E)	UN 1325 FLAMMABLE SOLID, ORGANIC, N.O.S. (CARBON), 4.1, II	UN 1325 Flammable solid, organic, n.o.s. (CARBON), 4.1, II	UN 1325 FLAMMABLE SOLID, ORGANIC, N.O.S. (CARBON), 4.1, II	UN 1325 FLAMMABLE SOLID, ORGANIC, N.O.S. (CARBON), 4.1, II
<b>14.3. Transport hazard class(es)</b>				
4.1	4.1	4.1	4.1	4.1
<b>14.4. Packing group</b>				
II	II	II	II	II

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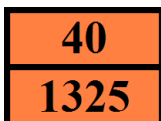
according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

ADR	IMDG	IATA	ADN	RID
<b>14.5. Environmental hazards</b>				
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No
No supplementary information available				

### 14.6. Special precautions for user

#### Overland transport

Classification code (ADR)	: F1
Special provisions (ADR)	: 274
Limited quantities (ADR)	: 1kg
Excepted quantities (ADR)	: E2
Packing instructions (ADR)	: P002, IBC08
Special packing provisions (ADR)	: B4
Mixed packing provisions (ADR)	: MP10
Portable tank and bulk container instructions (ADR)	: T3
Portable tank and bulk container special provisions (ADR)	: TP33
Tank code (ADR)	: SGAN
Vehicle for tank carriage	: AT
Transport category (ADR)	: 2
Special provisions for carriage - Packages (ADR)	: V11
Hazard identification number (Kemler No.)	: 40
Orange plates	:



Tunnel restriction code (ADR)	: E
EAC code	: 1Z

#### Transport by sea

Special provisions (IMDG)	: 274
Limited quantities (IMDG)	: 1 kg
Excepted quantities (IMDG)	: E2
Packing instructions (IMDG)	: P002
IBC packing instructions (IMDG)	: IBC08
IBC special provisions (IMDG)	: B21, B4
Tank instructions (IMDG)	: T3
Tank special provisions (IMDG)	: TP33
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-G
Stowage category (IMDG)	: B
Segregation (IMDG)	: SG72

#### Air transport

PCA Excepted quantities (IATA)	: E2
PCA Limited quantities (IATA)	: Y441
PCA limited quantity max net quantity (IATA)	: 5kg
PCA packing instructions (IATA)	: 445
PCA max net quantity (IATA)	: 15kg
CAO packing instructions (IATA)	: 448
CAO max net quantity (IATA)	: 50kg
Special provisions (IATA)	: A3, A803
ERG code (IATA)	: 3L

#### Inland waterway transport

Classification code (ADN)	: F1
Special provisions (ADN)	: 274



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Limited quantities (ADN)	: 1 kg
Excepted quantities (ADN)	: E2
Equipment required (ADN)	: PP
Number of blue cones/lights (ADN)	: 1

### Rail transport

Classification code (RID)	: F1
Special provisions (RID)	: 274
Limited quantities (RID)	: 1kg
Excepted quantities (RID)	: E2
Packing instructions (RID)	: P002, IBC08
Special packing provisions (RID)	: B4
Mixed packing provisions (RID)	: MP10
Portable tank and bulk container instructions (RID)	: T3
Portable tank and bulk container special provisions (RID)	: TP33
Tank codes for RID tanks (RID)	: SGAN
Transport category (RID)	: 2
Special provisions for carriage – Packages (RID)	: W1
Colis express (express parcels) (RID)	: CE10
Hazard identification number (RID)	: 40

### 14.7. Maritime transport in bulk according to IMO instruments

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

##### REACH Annex XVII (Restriction List)

Not listed on REACH Annex XVII

##### REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

##### REACH Candidate List (SVHC)

Not listed on the REACH Candidate List

##### PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

##### POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

##### Ozone Regulation (1005/2009)

Not listed on the Ozone Depletion list (Regulation EU 1005/2009)

##### Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

##### Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

#### 15.1.2. National regulations

No additional information available

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

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### SECTION 16: Other information

#### Abbreviations and acronyms:

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

#### Full text of H- and EUH-statements:

Flam. Sol. 1	Flammable solids, Category 1
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according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

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### Full text of H- and EUH-statements:

H228	Flammable solid.
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The classification complies with : ATP 12

Safety Data Sheet (SDS)\_EMAL, EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.