

Safety data sheet

according to 1907/2006/EC, Article 31



Printing date: 13.04.2023

Version No: 9.01 (replaces version 1.00)

Revision: 13.04.2023

1 Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name: CarboTech, Formlinge und Granulate der Typen : A, C, D, AG, AGF, CGF, DGF, AGK, CGK, DGK, SE, CMS-H, Carbon Catalyst, Pool, Reaktivat, VA

Chemical Identification: Activated Carbon - High Density Skeleton

CAS Number:

7440-44-0

EC number:

931-328-0

Registration number: 01-2119488894-16-0035

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

Application of the substance / the preparation:

Carbonaceous Adsorbent for purification and treatment of gases, water and liquids.

Uses advised against: No further relevant information available.

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

CarboTech AC GmbH

Elisenstraße 119

45139 Essen

Germany

Tel: 0049 (0) 201-2489-900

FAX: 0049(0) 201-2489-800

E-Mail: info@carbotech.de

<http://www.carbotech.de>

1.4 Emergency telephone number: 0049 (0) 228/19-240 (Giftzentrale Bonn)

2 Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

The substance is not classified, according to the CLP regulation.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 Void

Hazard pictograms Void

Signal word Void

Hazard statements Void

2.3 Other hazards

Activated charcoal (especially when wet) can remove oxygen from the air in confined spaces, resulting in dangerously low oxygen concentrations. Before entering confined spaces that contain, or have recently contained, activated charcoal, the space should be checked by a professional for oxygen and carbon monoxide concentrations and any other hazards should also be checked. Avoid dust formation. Powdered activated carbon can form an explosive dust-air mixture. No ignition source should be present when transferring the product under pressure. Activated carbon has a large surface area which may cause self-heating if oxidised. See section 5. Spent (used) activated carbon may change properties due to the absorbed material. Appropriate precautions should also be taken when handling these products.

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

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3 Composition/information on ingredients

3.1 Substances

CAS No. Description

CAS: 7440-44-0 Activated Carbon - High Density Skeleton

Identification number(s)

EC number: 931-328-0

Additional information:

Activated Carbon, steam activated. A porous, amorphous, high surface area adsorbent material composed of largely elemental carbon, with a high density skeleton.

4 First aid measures

4.1 Description of first aid measures

General information:

As non-powdered activated carbon is low in dust content it poses very little hazard in an accidental workplace exposure. The first aid information below is based on contact with powdered activated carbon.

After inhalation:

If coughing, shortness of breath or other breathing problems occur, remove person to fresh air. Seek medical attention if symptoms persist. If necessary, restore normal breathing by first aid measures.

After skin contact:

Remove contaminated clothes; rinse the skin with water and soap. Obtain medical attention if irritation becomes apparent.

After eye contact:

Immediately flush with copious amounts of water (remove contact lenses, provided that it can be done easily). Obtain medical attention if irritation becomes apparent.

After swallowing:

Do not induce vomiting. If conscious, give several glasses of water to drink. Never put anything in the mouth of an unconscious person. Seek medical attention if symptoms occur

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents:

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Use fire extinguishing methods suitable to surrounding conditions.

For safety reasons unsuitable extinguishing agents: Water with full jet

5.2 Special hazards arising from the substance or mixture

Avoid stirring up dust clouds.

Wet activated carbon may cause oxygen depletion in enclosed spaces.

Used activated carbon may produce other combustion products.

After a fire, smoldering hotspots within the activated carbon may be present for a long time.

Activated carbon which has been allowed to smolder for a long time in a confined space may accumulate carbon monoxide above its lower explosion limit.

Formation of toxic gases is possible during heating or in case of fire.

In case of fire, the following can be released:

Carbon monoxide

Carbon dioxide

5.3 Advice for firefighters

Protective equipment: Wear self-contained respiratory protective device.

Additional information

Cool endangered receptacles with water spray.

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Collect contaminated fire fighting water separately. It must not enter the sewage system.

6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.

Wear protective clothing.

No personal precautions required for virgin activated carbon. Please refer to heading 8 for details on personal protection.

Avoid formation of dust.

Keep away from ignition sources.

6.2 Environmental precautions: Avoid discharge to drains and contamination of water sources.

6.3 Methods and material for containment and cleaning up:

Vacuum spilled product and flush remaining product with plenty of water. Avoid stirring up. If the spilled product contains dust or if dust formation is possible, an explosion proof vacuum cleaner and/or cleaning systems has to be used which are useful for flammable dust. To avoid stirring of dust, do not use brooms or compressed air.

Other Information

Wet activated carbon depletes oxygen from air and, therefore, dangerously low levels of oxygen may be encountered. Whenever workers enter a vessel containing activated carbon, the vessels oxygen content should be determined and work procedures for potentially low oxygen areas should be followed.

Used or spend activated carbon may contain pollutants which require the material to be treated according to national law or local permits and which require the use of risk management measures when handling the materials.

Pick up mechanically.

Dispose of the material collected according to regulations.

6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

7.1 Precautions for safe handling

Prevent formation of dust.

Specific requirements or handling rules:

Whenever workers enter a vessel containing activated carbon, the vessels oxygen content should be determined and work procedures for potentially low oxygen areas should be followed.

Any unavoidable deposit of dust must be regularly removed.

Ensure good ventilation/exhaustion at the workplace.

Information about fire and explosion protection:

Dust can combine with air to form an explosive mixture.

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

7.2 Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles: Store only in the original receptacle.

Information about storage in one common storage facility: Store away from oxidising agents.

Further information about storage conditions:

Access to storage of wet activated carbon should be restricted. Oxygen level alarms are advisable in enclosed storage rooms containing wet activated carbon.

Store in cool, dry conditions in well sealed receptacles.

7.3 Specific end use(s) No further relevant information available.

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8 Exposure controls/personal protection

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:		
CAS: 7440-44-0 Activated Carbon - High Density Skeleton		
OEL (Ireland)	Long-term value: 10* 4** mg/m ³ *total inhalable **respirable dust	
DNELs		
CAS: 7440-44-0 Activated Carbon - High Density Skeleton		
Inhalative	DNEL(long/local)	0.9 mg/m ³ (Consumer) 1.84 mg/m ³ (Workers (Industrial/Professional))
PNECs		
CAS: 7440-44-0 Activated Carbon - High Density Skeleton		
PNEC(soil)	10 mg/kg soil dw (soil)	

8.2 Exposure controls

Appropriate engineering controls No further data; see item 7.

Individual protection measures, such as personal protective equipment

General protective and hygienic measures:

When handling non-powdered or slurried activated carbon no personal protection equipment is required.

Do not eat, drink, smoke or sniff while working.

Keep away from foodstuffs, beverages and feed.

The usual precautionary measures are to be adhered to when handling chemicals.

Respiratory protection:

Use a half face mask fitted with P2 filter (minimum effectiveness of 90%) or better for handling powdered activated carbon.

Hand protection

Protective gloves and protective skin cream

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye/face protection Safety glasses

Body protection: Protective work clothing

Environmental exposure controls No further relevant information available.

9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Physical state

Solid

Form:

Solid

Colour:

Black

Odour:

Odourless

Odour threshold:

Not determined.

Melting point/freezing point:

> 1000 °C

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Boiling point or initial boiling point and boiling range	> 1000 °C
Flammability	Product is not flammable.
Lower and upper explosion limit	
Lower:	Not applicable.
Upper:	Not applicable.
Flash point:	Not applicable.
Ignition temperature:	Not determined.
Decomposition temperature:	Not determined.
pH at 20 °C	6 - < 11.5
Viscosity:	
Kinematic viscosity	Not applicable.
Dynamic:	Not applicable.
Solubility	
water:	Insoluble.
Partition coefficient n-octanol/water (log value)	Not applicable.
Vapour pressure:	Not applicable.
Density and/or relative density	
Density:	Not determined.
Relative density	Not determined.
Bulk density:	350 - 580 kg/m ³
Vapour density	Not applicable.
Relative gas density	Not applicable.
Particle characteristics	See item 3.
9.2 Other information	The physical and chemical properties of the spent material may be different to that of virgin activated carbon.
Explosive properties:	Product is not explosive. However, formation of explosive air/dust mixtures are possible.
Oxidising properties	No
Evaporation rate	Not applicable.

10 Stability and reactivity

10.1 Reactivity No further relevant information available.

10.2 Chemical stability No decomposition if used and stored according to specifications.

Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

10.3 Possibility of hazardous reactions

Contact with strong oxidizers, i.e. chlorine, liquid oxygen, ozone may result in rapid combustion/possible explosion.

10.4 Conditions to avoid

Keep away from heat and direct sunlight.

Avoid formation of dust.

10.5 Incompatible materials:

Reacts with strong acids.

Reacts with strong oxidising agents.

10.6 Hazardous decomposition products: Carbon monoxide and carbon dioxide

11 Toxicological information

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

Acute toxicity Based on available data, the classification criteria are not met.

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LD/LC50 values relevant for classification:		
CAS: 7440-44-0 Activated Carbon - High Density Skeleton		
Oral	LD50	> 2000 mg/kg /female (Rat) (OECD Guideline 423) No treatment related effects were observed
Dermal	LD50	mg/kg
Inhalative	LC50 (1h)	> 8.5 mg/L (Rat) (OECD Guideline 403)

Skin corrosion/irritation Based on available data, the classification criteria are not met.

Serious eye damage/irritation Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation Not sensitizing, based on the Local Lymph node test (OECD 429)

Germ cell mutagenicity Based on available data, the classification criteria are not met.

Carcinogenicity Based on available data, the classification criteria are not met.

Reproductive toxicity Based on available data, the classification criteria are not met.

STOT-single exposure Based on available data, the classification criteria are not met.

STOT-repeated exposure Based on available data, the classification criteria are not met.

Aspiration hazard Based on available data, the classification criteria are not met.

11.2 Information on other hazards

Endocrine disrupting properties Substance is not listed.

12 Ecological information

12.1 Toxicity

Aquatic toxicity:

The substance is highly insoluble in water and it is unlikely, that the substance passes biological membranes. No harmful ecological effects are known.

Terrestrial toxicity:

Earthworm reproduction study (OECD 222), NOAEC for body weight loss 1000 mg/kg ground; NOAEC for reproduction 3200 mg/kg ground. In the ground not toxic.

12.2 Persistence and degradability No further relevant information available.

12.3 Bioaccumulative potential

The substance has a very low potential to bio-accumulate because of the chemical and physical properties

12.4 Mobility in soil No further relevant information available.

12.5 Results of PBT and vPvB assessment Not applicable.

12.6 Endocrine disrupting properties

The product does not contain substances with endocrine disrupting properties.

12.7 Other adverse effects No further relevant information available.

13 Disposal considerations

13.1 Waste treatment methods

Disclaimer: Information in this section relates to the delivered product in its intended composition as described in section 3 of this SDS. Contamination or processing may change the waste properties and requirements. Regulations may also affect empty containers, residually emptied containers/parts or rinsing fluids. State/regional and local regulations may differ from federal regulations.

Recommendation:

For virgin activated carbon no specified disposal methods apply, however, avoid discharge to drains. Spent activated carbon may require specific disposal considerations/packaging.

Uncleaned packaging

Recommendation: Disposal must be made according to official regulations.

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14 Transport information

14.1 UN number or ID number ADR/RID/ADN, IMDG, IATA	Void
14.2 UN proper shipping name ADR/RID/ADN, IMDG, IATA	Void
14.3 Transport hazard class(es) ADR/RID/ADN, IMDG, IATA Class	Void
14.4 Packing group ADR/RID/ADN, IMDG, IATA	Void
14.5 Environmental hazards:	Not applicable.
14.6 Special precautions for user	Not applicable.
14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
Transport/Additional information:	Not dangerous according to the above specifications.
UN "Model Regulation":	Void

15 Regulatory information

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

Directive 2012/18/EU

Named dangerous substances - ANNEX I Substance is not listed.

DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

Substance is not listed.

REGULATION (EU) 2019/1148

Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

Substance is not listed.

Annex II - REPORTABLE EXPLOSIVES PRECURSORS Substance is not listed.

Regulation (EC) No 273/2004 on drug precursors Substance is not listed.

Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

Substance is not listed.

15.2 Chemical safety assessment: A Chemical Safety Assessment has been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Date of previous version: 23.03.2023

Version number of previous version: 1.00

Abbreviations and acronyms:

REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals

MARPOL: (from Marine Pollutant) International Convention for the Prevention of Marine Pollution from Ships

IBC Code: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk

UN: United Nations (also UNO: United Nations Organization)

NOEC: No Observed Effect Concentration

OECD: Organisation for Economic Co-operation and Development

ASTM: American Society for Testing and Materials

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WAF: Water Accommodated Fraction

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

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