

## Chemical Safety Data Sheet MSDS / SDS

## Carbon SDS

Revision Date:2024-04-25 Revision Number:1

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****Product identifier**

Product name: Carbon  
CAS: 7440-44-0

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

Relevant identified uses: For R&D use only. Not for medicinal, household or other use.  
Uses advised against: none

**Company Identification**

Company: Chemicalbook.in  
Address: 5 vasavi Layout Basaveswara Nilayam Pragathi Nagar Hyderabad, India -500090  
Telephone: +91 9550333722

**SECTION 2: Hazards identification****Classification of the substance or mixture**

Eye irritation, Category 2  
Specific target organ toxicity - single exposure, Category 3

## GHS label elements, including precautionary statements

Pictogram(s)



Signal word

Warning

### Hazard statement(s)

H319 Causes serious eye irritation

H335 May cause respiratory irritation

### Precautionary statement(s)

#### Prevention

P264 Wash ... thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P271 Use only outdoors or in a well-ventilated area.

#### Response

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P319 Get medical help if you feel unwell.

#### Storage

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

#### Disposal

P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

#### Other hazards which do not result in classification

no data available

### SECTION 3: Composition/information on ingredients

#### Substance

Chemical name:	Carbon
Common names and synonyms:	Carbon
CAS number:	7440-44-0
EC number:	231-153-3
Concentration:	100%

### SECTION 4: First aid measures

#### Description of necessary first-aid measures

##### If inhaled

Fresh air, rest.

##### Following skin contact

Rinse and then wash skin with water and soap.

##### Following eye contact

First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

##### Following ingestion

Rinse mouth. Rest.

#### Most important symptoms/effects, acute and delayed

Excerpt from ERG Guide 133 [Flammable Solids]: Fire may produce irritating and/or toxic gases. Contact may cause burns to skin and eyes. Contact with molten substance may cause severe burns to skin and eyes. Runoff from fire control may cause pollution. (ERG, 2016)

No significant symptoms (USCG, 1999)

Exposure Routes: inhalation, skin and/or eye contact Symptoms: Cough, dyspnea (breathing difficulty), black sputum, decreased pulmonary function, lung fibrosis Target Organs: respiratory system, cardiovascular system (NIOSH, 2016)

### **Indication of immediate medical attention and special treatment needed, if necessary**

Immediate first aid: Ensure that adequate decontamination has been carried out. If patient is not breathing, start artificial respiration, preferably with a demand-valve resuscitator, bag-valve-mask device, or pocket mask, as trained. Perform CPR as necessary. Immediately flush contaminated eyes with gently flowing water. Do not induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain an open airway and prevent aspiration. Keep patient quiet and maintain normal body temperature. Obtain medical attention. Flammable Solids

## **SECTION 5: Firefighting measures**

### **Suitable extinguishing media**

If material on fire or involved in fire: Use water in flooding quantities as fog. Solid streams of water may spread fire. Use foam, dry chemical, or carbon dioxide. When fire is out, cover all suspected material with dry sand or earth to prevent re-ignition until material can be permanently disposed of.

### **Specific hazards arising from the chemical**

Excerpt from ERG Guide 133 [Flammable Solids]: Flammable/combustible material. May be ignited by friction, heat, sparks or flames. Some may burn rapidly with flare-burning effect. Powders, dusts, shavings, borings, turnings or cuttings may explode or burn with explosive violence. Substance may be transported in a molten form at a temperature that may be above its flash point. May re-ignite after fire is extinguished. (ERG, 2016)  
Special Hazards of Combustion Products: Incomplete combustion forms toxic carbon monoxide. (USCG, 1999)

### **Special protective actions for fire-fighters**

Use water spray, powder, foam, carbon dioxide. In case of fire: keep drums, etc., cool by spraying with water.

## **SECTION 6: Accidental release measures**

### **Personal precautions, protective equipment and emergency procedures**

Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Sweep spilled substance into covered containers. If appropriate, moisten first to prevent dusting. Store and dispose of according to local regulations.

### **Environmental precautions**

Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Sweep spilled substance into covered containers. If appropriate, moisten first to prevent dusting. Store and dispose of according to local regulations.

### Methods and materials for containment and cleaning up

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

## SECTION 7: Handling and storage

### Precautions for safe handling

NO open flames, NO sparks and NO smoking. Closed system, dust explosion-proof electrical equipment and lighting. Prevent deposition of dust. Prevent build-up of electrostatic charges (e.g., by grounding). Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

### Conditions for safe storage, including any incompatibilities

Fireproof. Separated from strong oxidants.

## SECTION 8: Exposure controls/personal protection

### Control parameters

### Occupational Exposure limit values

Component	Carbon
CAS No.	7440-44-0
	NIOSH concluded that the documentation cited by OSHA was inadequate to support the proposed PEL (as an 8-hour TWA) of 10 mg/cu m for graphite (synthetic).

### Biological limit values

no data available

### Appropriate engineering controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

### Individual protection measures, such as personal protective equipment (PPE)

**Eye/face protection**

Wear safety goggles.

**Skin protection**

Wear fire/flame resistant and impervious clothing. Handle with gloves. Gloves must be inspected prior to use. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

**Respiratory protection**

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

**Thermal hazards**

no data available

**SECTION 9: Physical and chemical properties and safety characteristics**

Physical state:	Carbon, activated is a black grains that have been treated to improve absorptive ability. May heat spontaneously if not properly cooled after manufacture.
Colour:	Steel gray to black greasy feeling solid.
Odour:	Odorless.
Melting point/freezing point:	320°C(dec.)(lit.)
Boiling point or initial boiling point and boiling range:	185°C/0.2mmHg(lit.)
Flammability:	Combustible Solid
Lower and upper explosion limit/flammability limit:	no data available
Flash point:	109°C(lit.)

Auto-ignition temperature:	842°F
Decomposition temperature:	no data available
pH:	no data available
Kinematic viscosity:	no data available
Solubility:	Insoluble (NIOSH, 2016)
Partition coefficient n-octanol/water:	no data available
Vapour pressure:	0 mm Hg (approx) (NIOSH, 2016)
Density and/or relative density:	2 at 68° F (USCG, 1999)
Relative vapour density:	no data available
Particle characteristics:	no data available

## SECTION 10: Stability and reactivity

### Reactivity

The substance may ignite spontaneously on contact with air. On combustion, forms toxic carbon monoxide if ventilation is insufficient. The substance is a strong reducing agent. It reacts violently with oxidants such as bromates, chlorates and nitrates. The substance is a strong reducing agent. It reacts violently with oxidants.

### Chemical stability

no data available

### Possibility of hazardous reactions

Activated carbon exposed to air is a potential fire hazard because of its very high surface area and adsorptive capacity. Freshly prepared material may heat spontaneously in air, and presence of water accelerates this. Dust explosion possible if in powder or

granular form, mixed with air. If dry, it can be charged electrostatically by swirling, pneumatic transport, pouring, etc., Dust explosion possible if in powder or granular form, mixed with air. Incompatible with air, metals, unsaturated oils. [Lewis]. Incompatible with very strong oxidizing agents such as fluorine, ammonium perchlorate, bromine pentafluoride, bromine trifluoride, chlorine trifluoride, dichlorine oxide, chlorine trifluoride, potassium peroxide, etc.

#### **Conditions to avoid**

no data available

#### **Incompatible materials**

Dust is explosive when exposed to heat or flame or oxides, peroxides, oxosalts, halogens, interhalogens, ammonium nitrate + heat, ammonium tetrachloride at 240 deg C, bromates,  $\text{Ca}(\text{OCl})_2$ , chlorates,  $\text{Cl}_2$ , ( $\text{Cl}_2 + \text{Cr}(\text{OCl})_2$ ),  $\text{ClO}$ ,  $\text{F}_2$ , iodates,  $\text{IO}_5$ ,  $(\text{Pb}(\text{NO}_3)_2)$ ,  $\text{HgNO}_3$ ,  $\text{HNO}_3$ , (oils + air), (potassium + air),  $\text{Na}_2\text{S}$ ,  $\text{Zn}(\text{NO}_3)_2$ .

#### **Hazardous decomposition products**

no data available

### **SECTION 11: Toxicological information**

#### **Acute toxicity**

Oral: LD50 Rat oral > 10,000 mg/kg

Inhalation: no data available

Dermal: no data available

#### **Skin corrosion/irritation**

no data available

#### **Serious eye damage/irritation**

no data available

#### **Respiratory or skin sensitization**

no data available



**Germ cell mutagenicity**

no data available

**Carcinogenicity**

no data available

**Reproductive toxicity**

no data available

**STOT-single exposure**

no data available

**STOT-repeated exposure**

no data available

**Aspiration hazard**

A nuisance-causing concentration of airborne particles can be reached quickly when dispersed.

**SECTION 12: Ecological information****Toxicity**

Toxicity to fish: no data available

Toxicity to daphnia and other aquatic invertebrates: no data available

Toxicity to algae: no data available

Toxicity to microorganisms: no data available

**Persistence and degradability**

no data available

**Bioaccumulative potential**

no data available

**Mobility in soil**

no data available

**Other adverse effects**

no data available

**SECTION 13: Disposal considerations**

**Disposal methods**

**Product**

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

**Contaminated packaging**

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

**SECTION 14: Transport information**

**UN Number**

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

**UN Proper Shipping Name**

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

### **Transport hazard class(es)**

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

### **Packing group, if applicable**

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

### **Environmental hazards**

ADR/RID: No

IMDG: No

IATA: No

### **Special precautions for user**

no data available

### **Transport in bulk according to IMO instruments**

no data available

## **SECTION 15: Regulatory information**

### **Safety, health and environmental regulations specific for the product in question**

#### **European Inventory of Existing Commercial Chemical Substances (EINECS)**

Listed.

#### **EC Inventory**

Listed.

#### **United States Toxic Substances Control Act (TSCA) Inventory**

Listed.

**China Catalog of Hazardous chemicals 2015**

Not Listed.

**New Zealand Inventory of Chemicals (NZIoC)**

Listed.

**(PICCS)**

Listed.

**Vietnam National Chemical Inventory**

Listed.

**IECSC)**

Listed.

**Korea Existing Chemicals List (KECL)**

Listed.

**SECTION 16: Other information**

**Abbreviations and acronyms**

CAS: Chemical Abstracts Service

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

IMDG: International Maritime Dangerous Goods

IATA: International Air Transportation Association

TWA: Time Weighted Average

STEL: Short term exposure limit

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

EC50: Effective Concentration 50%

## References

IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>

HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>

IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>

eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website:  
[http://www.echemportal.org/echemportal/index?pageID=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en)

CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>

ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>

ERG - Emergency Response Guidebook by U.S. Department of Transportation, website:  
<http://www.phmsa.dot.gov/hazmat/library/erg>

Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>

ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

## Other Information

Health effects of exposure to the substance have been extensively investigated but none has been found. This card applies to pure carbon in a non-fibrous form. Carbon fibres or carbon containing polycyclic aromatic hydrocarbons may pose different hazards. See ICSCs 0471 and 0893.

Disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. We as supplier shall not be held liable for any