

## Section 1. PRODUCT IDENTIFICATION

### Product Identifiers

Product Name: Activated Carbon.

CAS number: 7440-44-0

Product Part Numbers: 99000, 99100, 99150

Synonyms: Carbon black, odorless black powder.

Recommended use: Laboratory chemicals, synthesis of substances.

Uses advised against: None known.

### Details of the Supplier of the Safety Data Sheet:

Company: Sorbent Technologies

5955 Peachtree Corners East  
Norcross, GA 30071 USA

**Emergency Telephone Number:** 1-866-767-2832

## Section 2. HAZARD IDENTIFICATION

United States: According OSHA 29 CFR 1910.1200 HCS

### GHS Classification of the Substance or Mixture including Precautionary Statements:

#### Emergency Overview:

Potential Health Effects: Medical conditions aggravated by exposure: Not expected to be a health hazard.

Physical hazards: Not classified

Health hazards: Eye irritation, Category 2B, Respiratory irritation, Category 3.

Environmental hazards: See Section IV

OSHA defined hazards: Not classified

Chronic Effects: No adverse effects expected.

Carcinogenic Effects: IARC: Not listed NTP: Not listed OSHA: Not regulated

### GHS Label Elements:

**Signal word:** Warning



**Hazard statement:** May form combustible dust concentrations in air. Contact may cause eye irritation. Dust may be slightly irritating to respiratory tract. Wet activated carbon removes oxygen from air causing a severe hazard to workers in enclosed or confined space.

H320: Causes eye irritation.

### Precautionary Statement:

Prevention: P261: Avoid breathing dust/fume.

P264: Wash thoroughly after handling.

Response: P305: IF IN EYES: Irrigate for 15 minutes.

P304: IF INHALED: Remove to fresh air.

Storage: P402: Store in a dry place.

P403: Store in a well ventilated area.

P404: Store in closed container.

Disposal: P501: Dispose of waste and residues including containers in accordance with local authority requirements.

**Other Hazards Not Otherwise Classified (HNOC):** None known.

**Supplemental information:** None

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## Section 3. COMPOSITION/INFORMATION ON INGREDIENTS

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### Chemical Characterization:

Components	CAS No. / EC No.	%	REACH Registration No.	INDEX No.
Activated carbon	744-44-0	100	—	—

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Synonyms: Activated carbon.

Formula: C

Molecular weight: 12.01 g/mole

Composition comments: All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

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## Section 4. FIRST AID MEASURES

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### Description of First Aid Measures

**Skin:** Wash material off skin with soap and water. Seek medical attention if irritation develops and persists.

**Eyes:** Do not rub eyes. Flush with copious amounts of water for 15 minutes while holding eyelids apart. Remove contact lenses, if present and easy to do. Seek medical attention if irritation develops and persists.

**Ingestion:** Rinse the mouth. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content does not get into lungs. Seek medical attention if gastrointestinal symptoms develop.

**Inhalation:** Remove to fresh air and keep at rest. Seek medical attention if cough or respiratory symptoms develop or persists.

### Most Important Symptoms and Effects, both acute and delayed

People with pre-existing eye problems or impaired respiratory may be more susceptible to the potential effects of the dust.

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

Notes to Physician: Provide general supportive measures and treat symptomatically.

### General Information

If you feel unwell, seek medical advise (show label where possible). Ensure that medical personnel are aware of the materials involved, and take precautions to protect themselves.

**Description of necessary first aid measures:** Protection of first-aiders: No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

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## Section 5. FIRE-FIGHTING MEASURES

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**Suitable Extinguishing Media:** Use dry chemical powder.

**Unsuitable Extinguishing Media:** Avoid high pressure media which could cause the formation of a potentially explosive dust-air mixture.

**Specific Hazards arising from the chemical:** May form explosive dust-air mixture if dispersed. During fire, gases hazardous to health may be formed.

Flammability Limits in Air: LFL and UFL Not Applicable.

Auto-ignition temperature: Not available

**Protective Equipment and precautions for firefighters:** Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Fire Fighting Equipment: Fire fighting personnel should wear full protective equipment, including self-contained breathing apparatus (SCBA) for all inside fires and large outdoor fires.

### Protection of fire-fighters:

Fire Fighting Instructions: In the event of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply. Wear self-contained breathing apparatus and protective clothing.

**General fire hazards:** Thermal decomposition or combustion may liberate carbon dioxide, carbon monoxide.

**Specific methods:** Use standard firefighting procedures and consider the hazards of other involved materials.

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## Section 6. ACCIDENTAL RELEASE MEASURES

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### Personal Precautions, Protective Equipment and Emergency Procedures:

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. Surfaces may become slippery after spillage. Wear suitable protective clothing and gloves. For personal protection, see section 8 of the SDS.

### Environmental Precautions:

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### Methods for Containment:

Avoid the generation of dusts during clean-up.

### Methods for Clean-up:

If a Spill or Leak Occurs: Ventilate the contaminated area. Clean up spills in a manner that does not disperse dust into the air. Handle in accordance with industrial hygiene and safety practices.

These practices include avoiding unnecessary exposure, and removal from eyes, skin, and clothing. Prevent product from entering drains.

Disposal Method: Sweep up or vacuum up and shovel into suitable contains for disposal. Dispose in a facility for non-hazardous wastes. Spent should be disposed of in accordance with State and Federal laws.

Container Disposal: Do not reuse empty bags or drums. Dispose of used bags in facility permitted for non-hazardous wastes.

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## Section 7. HANDLING AND STORAGE

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### Precautions for Safe Handling

Handling: Put on appropriate personal protective equipment (see Section 8). Avoid prolonged contact with eyes and skin. Do not breath dust. Keep away from ignition sources. Use in well ventilated areas. Protect containers from physical damage. Wash hands after handling. Avoid release to the environment.

### Conditions for Safe Storage, Including any Incompatibilities

Storage: Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Store above freezing. Keep away from oxidizers, sunlight, heat or flames. Store away form ignition sources. Store in a dry place.

**Advice on general occupational hygiene:** Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas.

### Specific end uses

No other specific uses are stipulated.

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## Section 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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### Control Parameters

#### Occupational Exposure Guidelines:

Component	OSHA PEL	ACGIH TLV
Activated carbon (7440-44-0)	5 mg/m <sup>3</sup> , 8 hours (TWA), particles 15 mg/m <sup>3</sup> , 8 hours (TWA), total dust	10 mg/m <sup>3</sup> , 8 hours (TWA)

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ACGIH is the American Conference of Governmental Industrial Hygienists

OSHA is the Occupational Safety and Health Administration

NIOSH is the National Institute of Occupational Safety and Health

PEL is the Permissible Exposure Limits established by OSHA.

TLV is the Threshold Limit Value a term ACGIH uses to express the maximum airborne concentration of a material to which most workers can be exposed during a normal daily and weekly work schedule without adverse effects.

MSHA is the Mine Safety and Health Administration

## Exposure Controls

**Engineering Controls:** Provide eyewash station. Use local exhaust to control emissions near the source.

Ventilation systems should be configured to prevent exceeding the recommended or regulated exposure limits (i.e. OSHA PELs).

**Eye Protection:** Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU). Safety glasses with side shields are recommended for any type of handling. Where eye contact or dusty conditions may likely, dust tight goggles are recommended. Have eye washing equipment available.

**Skin protection:** Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Avoid skin contact with this product. Wear appropriate dust resistant clothing. Wash contaminated clothing and clean protective equipment before reuse. Wash skin thoroughly after handling.

Full contact material: Nitrile rubber of minimum layer thickness 0.11 mm and break through time 480 minutes.

**Body protection:** Choose protection in relation to its type, to the concentration and the amount of any dangerous substances, and to the specific work-place. The type of protective equipment must be selected according to the concentration and of the amount of any dangerous substances at the specific workplace.

**Respiratory Protection:** Follow the OSHA respiratory regulations found in 29 CFR 1910.134 or European Standard EN149. Keep dust exposure to a minimum with engineering and administrative controls.

Use appropriate NIOSH/MSHA approved particulate respirators if necessary. Observe respirator use limitations specified by NIOSH/MSHA or the manufacturer. Use type N95 (US) or type P1 (EN 143) dust masks for nuisance levels of dust.

**Hand Protection:** Wear appropriate chemical resistant gloves. Suits can be recommended by the glove supplier

**General Industrial Hygiene Considerations:** Handle in accordance with good industrial hygiene and safety practice.

Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco. Safety shower and eye wash should be available close to work areas.

**Environmental Exposure Controls:** Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

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## Section 9. PHYSICAL AND CHEMICAL PROPERTIES

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<u>Appearance:</u>	Black granular or powder material.
Physical State:	Solid.
Color:	Black.
Form:	Granular or powder
Odor:	Odorless.
Odor Threshold:	Not available.
pH:	2 to 8 [Conc. (%w/w): 10%].
Melting Point/Range:	Not available.
Boiling Point/Range:	Not available.
Flash Point:	Not available.
Evaporation Rate:	Not available.
Flammability (solid, gas); Flammability or Explosive Limits	Non-flammable.
Upper:	Not available.
Lower:	Not available.
Vapor Pressure:	Not available.
Vapor Density:	Not available.
Relative Density:	0.25 to 0.375 at 25 deg. C (water =1).
Solubility (water):	0.000088gm/L.
Solubility (solvents):	Insoluble cold water and hot water.
Partition Coefficient; n-octanol/water:	No data available.
Auto-ignition Temperature:	420 to 450 deg. C, (788 to 842 deg. F).
Decomposition Temperature:	Not available.
Viscosity:	Not available.
Bulk density:	0.7 kg/m <sup>3</sup> .
Explosive properties:	Not explosive.
Oxidizing properties:	Not oxidizing.
<u>Aerosol Product:</u>	
Heat of combustion	-32796600 J/kg

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## Section 10. STABILITY AND REACTIVITY

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### Reactivity

The product is stable and non-reactive under normal conditions of use, storage and transport. Contact or mixture with oxidizing agent such as nitric acid may cause ignition or explosion.

### Chemical Stability

This product is stable under normal conditions of storage, shipment and use. Avoid storing at high temperatures or in direct sunlight. Do not store above 24 deg. C.

### Possibility of Hazardous Reactions

No dangerous reaction known under normal conditions of normal use.

### Conditions to Avoid

Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Prevent dust accumulation.

### Incompatible Materials

Contact with strong oxidizers such as ozone, liquid oxygen, chlorine, permanganate, etc. may result in rapid combustion.

### Hazardous Decomposition Products

Irritating and/or toxic fumes and gases may be emitted upon the product's decomposition. Thermal decomposition can lead to release carbon oxides such as carbon monoxide and carbon dioxide.

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## Section 11. TOXICOLOGICAL INFORMATION

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### Information on Toxicological Effects

#### Acute Toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation Dusts
Activated carbon (7440-44-0)	>5000 mg/kg Rat	>2000 mg/kg Rat	8500 mg/m3 Rat/1 hour

**Routes of Exposure:** Eye contact, skin and upper respiratory system.

**Toxicologically Synergistic Products:** Occupational exposure may cause adverse effects.

**Delayed and Immediate Effects as well as Chronic Effects from Short and Long Term Exposure**

**Skin corrosion/irritation:** Skin—Edema (Rabbit), Score: 0; Skin-Erythema/Eschar (Rabbit), Score: 0;

**Serious eye damage/eye irritation:** Eye contact: Non-irritating to the eyes. Eyes—Cornea opacity (Rabbit), Score: 0; Eyes Edema of conjunctivae (Rabbit), Score: 0; Eyes-Iris lesion (Rabbit), 0.

**Respiratory Sensitization:** Not classified.

**Skin Sensitization:** Non sensitizing ( skin/ mouse).

**Carcinogenicity:** Table below indicates if each agency has listed any ingredient as a Carcinogen.

Component	CAS-No.	IARC	NTP	ACGIH	OSHA	Mexico
Activated carbon	7440-44-0	Not listed	Not listed	Not listed	Not listed	Not listed

**Mutagenic Effects:** No known significant effects or critical hazards.

OECD 461 Bacteria Reverse Mutation Test: Negative.

OECD 476 In vitro Mammalian Cell Gene Mutation Test: Negative.

OECD 473 In vitro Mammalian Chromosomal Aberration Test: Negative.

**Reproductive Effects:** This product is not expected to cause reproductive or developmental effects.

**Developmental Effects:** No known significant effects or critical hazards.

**Teratogenicity:** No known significant effects or critical hazards.

**Specific Target Organ Toxicity (STOT)-single exposure:** Not classified.

**Specific Target Organ Toxicity (STOT)-repeated exposure:** Not classified.

**Aspiration:** Not an aspiration hazard.

**Symptoms / Effects, Both Acute and Delayed:** Prolonged inhalation may be harmful.

**Endocrine Disruptor Information:** No information available.

**Symptoms:** Irritation and redness of eyes, irritation of skin and respiratory system may result from exposure to carbon dust.

**Other Adverse Effects:** No other specific acute or chronic health impact noted. The toxicological properties have not been fully investigated.

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## Section 12. ECOLOGICAL INFORMATION

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### Ecotoxicity

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have harmful or damaging effect on the environment.

### Environmental effects

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

### Persistence/ Degradability

No data is available on the degradability of this product.

### Bioaccumulation Potential

No information available.

**Aquatic toxicity:** Not expected to be harmful to aquatic organisms.

### Mobility in Soil

No information available.

### Other Adverse Effects

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

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## Section 13. DISPOSAL CONSIDERATIONS

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### Waste Treatment Methods

Disposal methods: Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazardous Waste Code: Not regulated.

Waste from Residues: Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated Packaging: Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied. Local regulations may be more stringent than state or federal requirements.

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## Section 14. TRANSPORTATION INFORMATION

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Land:	<b>DOT (US):</b>	Not regulated as dangerous goods.
	<b>ADR/RID (EU):</b>	Not regulated as dangerous goods.
	<b>TDG (Canada):</b>	Not regulated as dangerous goods.
Water:	<b>IMO/IMDG:</b>	Not regulated as dangerous goods.
Air:	<b>IACO/IATA:</b>	Not regulated as dangerous goods.

**Transportation in bulk according to Annex II of MARPOL 73/78 and the IBC Code:** Not applicable

**Special Precautions for User:** Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Addition Information:** RUW Series Activated Carbon is not considered spontaneously combustible under the "Self-Heating Test for Carbon" protocol listed in the United Nations Manual of Tests and Criteria [33.3.1]. As such, Class 4.2 provisions for U.S. DOT, IATA, ICAO, ADR and IMDG shipments do not apply.

## Section 15. REGULATORY INFORMATION

### Safety, Health and Environmental Regulations/ Legislation Specific for the Substance or Mixture International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	IECSC	KECL
7440-44-0	X	X	-	-	X	X	X	-	X	X	X

X indicates listed

### U.S. Federal Regulations

This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA: CAS# 7440-44-0 is listed on the TSCA inventory. Not regulated.

CERCLA Hazardous Substances and Corresponding RQs: None of the chemicals in this material have an RQ.

SARA Section 302 /304 Extremely Hazardous Substances: SARA 304 RQ: Not applicable.

Classification: Combustible dusts

SARA Codes: CAS# 7440-44-0:

SARA 311/312 Hazardous Categorization:

Immediate Health Hazard:	Yes
Delayed Health Hazard:	No
Fire Hazard:	No
Sudden Release of Pressure:	No
Reactive Hazard:	No

SARA Section 313: Not regulated

Clean Air Act:

This material does not contain any hazardous air pollutants, Class 1 Ozone depletors or Class 2 Ozone depletors.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances, Priority Pollutants or Toxic Pollutants under the CWA.

OSHA: Not regulated

CERCLA: Not listed

### U.S. Department of Transportation (DOT)

Reportable Quantity (RQ): No

DOT Marine Pollutant: No

DOT severe Marine Pollutant: No

### U.S. Department of Homeland Security (DHS)

This product does not contain any DHS chemicals.

### States Right-to-Know

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

CAS# 7440-44-0

California Prop 65: Not listed. California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

Massachusetts: This material not listed.

New York: This material not listed

New Jersey Right to Know: This material not listed.

Pennsylvania: This material not listed.

Florida: No data.

Rhode Island: This material not listed.

Illinois: No data.

Connecticut - Hazardous Air pollutants: No data.

### Canadian Classification

WHMIS: Non-controlled.

DSL : Listed.

EEC Council Directives relating to the classification, packaging, and labeling of dangerous substances and preparations.

Risk and Safety Phrases: R36: Irritating to eyes.

R37: Irritating to the respiratory system.

### Mexico—Grade

No information available.

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## Section 16. OTHER INFORMATION

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### Hazardous Material Information System (U.S.A.)

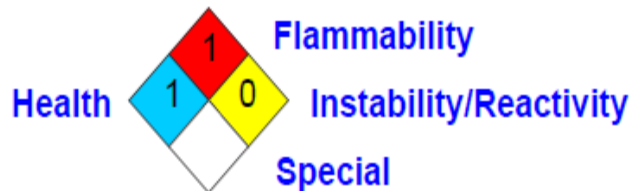
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The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

Health	/	0
Flammability	3	
Physical hazards	0	

### National Fire Protection Association (U.S.A.)

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**SDS REVISION SUMMARY:** Revision 006 of 09/12/2022 replaces revision 005 of 10/19/2021 .

*This document has been updated to comply with the U.S. OSHA HazCom 2012 Standard replacing the current Legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)*