

SAFETY DATA SHEET

1. Identification

Product identifier: CARBON, ACTIVATED, POWDER

Other means of identification

Product No.: E345, E343

Recommended use and restriction on use

Recommended use: Not available.

Restrictions on use: Not known.

Details of the supplier of the safety data sheet

Manufacturer

Company Name: Avantor Performance Materials, Inc.
Address: 3477 Corporate Parkway, Suite 200
Center Valley, PA 18034

Telephone: Customer Service: 855-282-6867

Fax: 610-573-2610
Contact Person: Environmental Health & Safety
E-mail: info@avantormaterials.com

Emergency telephone number:

CHEMTREC: 1-800-424-9300 within US and Canada

CHEMTREC: 1-703-527-3887 outside US and Canada

2. Hazard(s) identification

Hazard Classification

Not classified

OSHA hazard(s)

Combustible dust

Label Elements

Hazard Symbol: No symbol

Signal Word: Warning

Hazard Statement: not applicable

Precautionary Statement not applicable

Other hazards which do not result in GHS classification:

May form combustible dust concentrations in air.

3. Composition/information on ingredients

Mixtures

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%)*
ACTIVATED CARBON		7440-44-0	60 - 100%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

General information:	Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.
Ingestion:	Rinse mouth thoroughly. Call a POISON CENTER or doctor/physician if you feel unwell.
Inhalation:	Move to fresh air. Get medical attention if symptoms persist.
Skin Contact:	Wash skin thoroughly with soap and water. Get medical attention if irritation persists after washing. Wash contaminated clothing before reuse.
Eye contact:	Flush thoroughly with water. If irritation occurs, get medical assistance.

Most important symptoms/effects, acute and delayed

Symptoms: May cause irritation to skin, eyes, and respiratory tract.

Indication of immediate medical attention and special treatment needed

Treatment: Treat symptomatically. Symptoms may be delayed.

5. Fire-fighting measures

General Fire Hazards: Dust may form explosive mixture with air. In case of fire and/or explosion do not breathe fumes.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media: None known.

Specific hazards arising from the chemical: During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

Special fire fighting procedures: Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool. Cool containers exposed to flames with water until well after the fire is out.

Special protective equipment for fire-fighters: Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:	Keep unauthorized personnel away. Use personal protective equipment. See Section 8 of the SDS for Personal Protective Equipment.
Methods and material for containment and cleaning up:	Sweep up and place in a clearly labeled container for chemical waste. Clean surface thoroughly to remove residual contamination.
Notification Procedures:	Prevent entry into waterways, sewer, basements or confined areas. Inform authorities if large amounts are involved.
Environmental Precautions:	Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling:	Use personal protective equipment as required. Avoid contact with eyes, skin, and clothing. Avoid inhalation of dust. Wash thoroughly after handling.
Conditions for safe storage, including any incompatibilities:	Store locked up. Store in cool, dry place. Store in a well-ventilated place.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	type	Exposure Limit Values	Source
ACTIVATED CARBON - Respirable fraction.	TWA	2 mg/m ³	US. ACGIH Threshold Limit Values (2011)
ACTIVATED CARBON - Respirable.	REL	2.5 mg/m ³	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
ACTIVATED CARBON - Total dust.	PEL	15 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
ACTIVATED CARBON - Respirable fraction.	PEL	5 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
ACTIVATED CARBON - Respirable dust.	TWA	2.5 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
ACTIVATED CARBON - Total dust.	TWA	10 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
ACTIVATED CARBON - Respirable fraction.	TWA	5 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
ACTIVATED CARBON	TWA	15 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000) (2000)
ACTIVATED CARBON - Inhalable particles.	TWA	10 mg/m ³	US. ACGIH Threshold Limit Values (03 2014)
ACTIVATED CARBON - Respirable particles.	TWA	3 mg/m ³	US. ACGIH Threshold Limit Values (03 2014)
ACTIVATED CARBON - Respirable fraction.	TWA	5 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
ACTIVATED CARBON - Total dust.	TWA	15 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	TWA	50 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000) (2000)
	TWA	15 mg/m ³	US. OSHA Table Z-3 (29 CFR 1910.1000) (2000)
ACTIVATED CARBON - Respirable fraction.	TWA	15 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000) (2000)
	TWA	5 mg/m ³	US. OSHA Table Z-3 (29 CFR 1910.1000) (2000)
ACTIVATED CARBON -	PEL	15 mg/m ³	US. OSHA Table Z-1 Limits for Air

Total dust.			Contaminants (29 CFR 1910.1000) (02 2006)
ACTIVATED CARBON - Respirable fraction.	PEL	5 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)

Appropriate Engineering Controls No data available.

Individual protection measures, such as personal protective equipment

- General information:** Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.
- Eye/face protection:** Use tight fitting goggles if dust is generated.
- Skin Protection**
- Hand Protection:** Wear protective gloves.
- Other:** Wear suitable protective clothing.
- Respiratory Protection:** In case of inadequate ventilation use suitable respirator.
- Hygiene measures:** Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Provide eyewash station and safety shower.

9. Physical and chemical properties

Appearance

- Physical state:** solid
- Form:** Powder.
- Color:** Black
- Odor:** Odorless
- Odor threshold:** No data available.
- pH:** No data available.
- Melting point/freezing point:** 3,550 °C
- Initial boiling point and boiling range:** No data available.
- Flash Point:** not applicable
- Evaporation rate:** No data available.
- Flammability (solid, gas):** No data available.
- Upper/lower limit on flammability or explosive limits**
- Flammability limit - upper (%):** No data available.
- Flammability limit - lower (%):** No data available.
- Explosive limit - upper (%):** No data available.
- Explosive limit - lower (%):** No data available.
- Vapor pressure:** No data available.
- Vapor density:** No data available.
- Relative density:** No data available.
- Solubility(ies)**
- Solubility in water:** Insoluble in water
- Solubility (other):** No data available.
- Partition coefficient (n-octanol/water):** No data available.
- Auto-ignition temperature:** No data available.

Decomposition temperature:	No data available.
Viscosity:	No data available.
Other information	
Molecular weight:	12.01 g/mol

10. Stability and reactivity

Reactivity:	No dangerous reaction known under conditions of normal use.
Chemical Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	Hazardous polymerization does not occur.
Conditions to avoid:	Moisture. Contact with incompatible materials.
Incompatible Materials:	Strong oxidizing agents. Acids.
Hazardous Decomposition Products:	Oxides of Carbon.

11. Toxicological information

Information on likely routes of exposure

Ingestion:	May cause irritation of the gastrointestinal tract.
Inhalation:	May cause irritation to the respiratory system.
Skin Contact:	Prolonged skin contact may cause temporary irritation.
Eye contact:	Dust in the eyes will cause irritation.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral

Product:	No data available.
Specified substance(s):	
ACTIVATED CARBON	LD 50 (Rat): > 10,000 mg/kg LD (Mouse): > 5,000 mg/kg

Dermal

Product:	No data available.
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Inhalation

Product:	No data available.
Specified substance(s):	
ACTIVATED CARBON	LC 50 (Rat,) : > 64.4 mg/l

Repeated dose toxicity

Product:	None known.
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Skin Corrosion/Irritation

Product:	Prolonged or repeated contact may cause irritation.
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Serious Eye Damage/Eye Irritation

Product:	Dust in the eyes will cause irritation.
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Respiratory or Skin Sensitization

Product: Not a skin sensitizer.

Carcinogenicity

Product: This substance has no evidence of carcinogenic properties.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:

No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):

No carcinogenic components identified

Germ Cell Mutagenicity

In vitro

Product: No mutagenic components identified

In vivo

Product: No mutagenic components identified

Reproductive toxicity

Product: No components toxic to reproduction

Specific Target Organ Toxicity - Single Exposure

Product: No data available.

Specific Target Organ Toxicity - Repeated Exposure

Product: No data available.

Aspiration Hazard

Product: Not classified

Other effects: None known.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product: No data available.

Aquatic Invertebrates

Product: No data available.

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Aquatic Invertebrates

Product: No data available.

Toxicity to Aquatic Plants

Product: No data available.

Persistence and Degradability

Biodegradation

Product: There are no data on the degradability of this product.

BOD/COD Ratio
Product: No data available.

Bioaccumulative Potential
Bioconcentration Factor (BCF)
Product: No data available on bioaccumulation.

Partition Coefficient n-octanol / water (log Kow)
Product: No data available.

Mobility in Soil: No data available.

Other Adverse Effects: The product components are 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.

13. Disposal considerations

Disposal instructions: Discharge, treatment, or disposal may be subject to national, state, or local laws. 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.

Contaminated Packaging: Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT
Not regulated.

IMDG
Not regulated.

IATA
Not regulated.

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):
None present or none present in regulated quantities.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Acute (Immediate)

SARA 302 Extremely Hazardous Substance
None present or none present in regulated quantities.

SARA 304 Emergency Release Notification

None present or none present in regulated quantities.

SARA 311/312 Hazardous Chemical

<u>Chemical Identity</u>	<u>Threshold Planning Quantity</u>
ACTIVATED CARBON	10000 lbs

SARA 313 (TRI Reporting)

None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

None present or none present in regulated quantities.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):

None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65

No ingredient regulated by CA Prop 65 present.

US. New Jersey Worker and Community Right-to-Know Act

<u>Chemical Identity</u>
ACTIVATED CARBON

US. Massachusetts RTK - Substance List

<u>Chemical Identity</u>
ACTIVATED CARBON

US. Pennsylvania RTK - Hazardous Substances

<u>Chemical Identity</u>
ACTIVATED CARBON

US. Rhode Island RTK

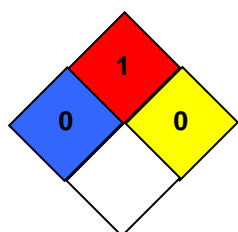
No ingredient regulated by RI Right-to-Know Law present.

Inventory Status:

Australia AICS:	On or in compliance with the inventory
Canada DSL Inventory List:	On or in compliance with the inventory
EINECS, ELINCS or NLP:	On or in compliance with the inventory
Japan (ENCS) List:	Not in compliance with the inventory.
China Inv. Existing Chemical Substances:	On or in compliance with the inventory
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory
Canada NDSL Inventory:	Not in compliance with the inventory.
Philippines PICCS:	On or in compliance with the inventory
US TSCA Inventory:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	On or in compliance with the inventory
Japan ISHL Listing:	Not in compliance with the inventory.
Japan Pharmacopoeia Listing:	Not in compliance with the inventory.

16. Other information, including date of preparation or last revision

NFPA Hazard ID



	Flammability
	Health
	Reactivity
	Special hazard.

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible

Issue Date: 06-14-2016

Revision Date: No data available.

Version #: 2.0

Further Information: No data available.

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