



**SAFETY DATA SHEET**  
**Activated Carbon**

**SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION**

**Product Name:** Activated Carbon - All Grades

ACF1000  
ACF1300  
ACF1500  
ACF1600  
FM10  
FM70  
FM100

**Other Names:** Activated Carbon Felt  
Activated Carbon Cloth

**Primary Use:** Vapor and liquid filtration or absorption in industrial, defense, and medical applications.

**CAS Number:** 7440-44-0

**Formula:** C

**Uses Advised Against:**  
None Known

**Distributor/Manufacturer:**  
CeraMaterials  
525 Silver Lake Rd  
Dingmans Ferry, PA 18328  
Emergency Contact: Jeff Optiz  
Product Stewardship: 518.701.6722

**24hr Emergency Contact Info:**

CHEMTREC US Transportation: 800.424.9300

CHEMTREC International Transportation: 703.741.5500



**SECTION 2 - HAZARDS IDENTIFICATION**

**United States:** Per OSHA 29 CFR 1910.1200 HCS

**GHS-US Classification 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 H320<br>STOT-SE, Category 3 H335  |
| Environmental hazards: | See Section IV  |
| OSHA defined hazards:  | Not classified  |
| Chronic effects:       | No adverse effects expected                                   |
| Carcinogenic effects:  | IARC - Not listed<br>NTP - Not listed<br>OSHA - Not regulated |

**Signal word, symbols, hazard and precautionary statements:**

**Hazard Pictogram**



**Signal Word**

Warning

**Hazard Statements**

Contact may cause eye irritation. Dust may be slightly irritating to the respiratory tract. Wet activated carbon removes oxygen from air causing a severe hazard to workers in enclosed or confined spaces.

- H15: Causes skin irritation
- H320: Causes eye irritation
- H335: May cause respiratory irritation

**Precautionary Statements**

- Prevention: P261 - Avoid breathing dust/fume.  
P264 - Wash thoroughly after handling.  
P271 - Use in well-ventilated area.  
P280 - Wear protective gloves, clothing, eye, and face protection.
- Response: P304 - If inhaled, remove to fresh air.  
P305 - If in eyes, irrigate for 15 minutes.  
P312 - Call Poison Control Center / Doctor if you feel sick.
- Storage: P402 - Store in a dry place.  
P403 - Store in a well ventilated area.  
P404 - Store in a closed container.  
P501 - Dispose of waste and residues including containers in accordance with local authority requirements.

Do not handle until all safety instructions have been read and understood. Do not breath dust if present. Use respiratory protection as required; see section 8 of the Safety Data Sheet. Wear protective clothing, gloves, face and eye protection. Wash thoroughly after use or exposure to dust. Do not eat, drink, or smoke while using this product. If concerned about exposure, get medical advice. Store in a manner to minimize airborne dust. Dispose of waste in accordance with local, state, and federal regulations.

**Supplementary Information:**

Use precautions if exposure exceeds the established OSHA limits. This material does not present a hazard unless dust is generated from processing operations.

**Hazards not classified that have been identified during the classification process**

Combustible dust. May form combustible dust concentrations in air. All powdered activated carbons are classified as weakly explosive (Dust explosion class St1): Given the necessary conditions of a strong ignition source, right concentrations of airborne carbon dust, adequate oxygen levels, and confinement, the potential for a deflagration event exists. A combustible dust hazard assessment and employee training should be conducted. See sections 7 and 9 for further information on combustible dust precautions.

**Unknown acute toxicity:**

No data available.

**Mixture rule**

Not applicable.

**SECTION 3 - COMPOSITION**

<u>Chemical &amp; Common Name</u>	<u>CAS#</u>	<u>% By Weight</u>
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Activated Carbon	744-44-0	100
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Impurities & stabilizing additives	Not applicable	
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\*Formula: C

\*Molecular weight: 12.01 g/mole

\*Occupational exposure limits, if available, are listed in Section 8 "Exposure Controls & Personal Protection".

**SECTION 4 - FIRST AID MEASURES**

**Description of necessary measures, subdivided according to the different routes of exposure, i.e., inhalation, skin, and eye contact, and ingestion.**

**Skin:**

Handling of this material may generate mild mechanical temporary skin irritation. If this occurs, rinse affected areas with water and wash gently. Do not rub or scratch exposed skin. If irritation persists seek medical attention.

**Eyes:**

In case of eye contact flush abundantly with water, occasionally lifting the upper and lower eyelids for a minimum of 15 minutes. If possible, have eye bath available. Do not rub eyes. If irritation persists seek medical attention.

**Inhalation:**

If these become irritated move to a dust free area, drink water and blow nose. If symptoms persist, seek medical advise.

**Ingestion:**

If the material is swallowed, rinse mouth and get immediate medical attention or advice. Do not induce vomiting unless directed to do so by medical personnel.

**Most important symptoms/effects, acute and delayed.**

Mild mechanical irritation to skin, eyes and upper respiratory system may result from exposure to dust. These effects are usually temporary. Individuals with pre-existing skin, eye, or respiratory conditions may be more susceptible to the potential effects of the dust. Material may be harmful if swallowed.



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

No additional information available.

**Notes to Physicians:**

Skin and respiratory effects are usually the result of temporary, mild mechanical irritation. Provide general supportive measures and treat symptomatically.

**General information:**

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

**SECTION 5 - FIRE FIGHTING MEASURES**

**Suitable (and unsuitable) extinguishing media.**

Use extinguishing agent suitable for surrounding combustible materials. Water fog, foam, dry chemicals, CO<sub>2</sub>, and water will extinguish activated carbon material fires. No known unsuitable extinguishing media.

**Specific hazards arising from the chemical  
(e.g., nature of any hazardous combustion products).**

Fire Hazard: None known  
Explosion Hazard: None known  
Reactivity: Contact with strong oxidizers such as ozone, liquid oxygen, chlorine, etc may result in fire.

**Special protective equipment and precautions for fire-fighters:**

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

**Protection of fire-fighters:**

Fire fighting instructions:  
In the event of fire and/or explosion do not breath 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 oxides.

**Specific methods:**

Use standard firefighting procedures and consider the hazards of other involved materials.

NFPA Codes:    Flammability: 1    Health: 1    Reactivity: 0    Special: 0

**SECTION 6 - ACCIDENTAL RELEASE MEASURES**

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

General measures:

Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. Ensure adequate ventilation. For personal protection, please refer to section 8.

Minimize airborne dust. Compressed air or dry sweeping should not be used for cleaning. See section 8 "Exposure Controls / Personal Protection" for exposure guidelines.

Avoid contact with skin or eyes.

**For non-emergency personnel:**

No additional information available

**For emergency responders:**

No additional information available. Refer to section 5.

**Environmental precautions:**

None.

**Methods and materials for containment and cleaning up.**

Frequently clean the work area with appropriately filtered vacuum or wet sweeping to minimize the accumulation of debris. Shovel into suitable containers for disposal in a non-hazardous waste facility. Do not use compressed air for clean-up. Disposal should be in accordance with Local, State, and Federal laws.

**Empty containers.**

Product packaging may contain residue. Do not reuse.

**SECTION 7 - HANDLING AND STORAGE****Precautions for safe handling.**

Handle fiber carefully to minimize airborne dust.

Avoid prolonged contact with eyes and skin. Do not breathe dust. Keep away from ignition sources and use in well ventilated areas. Wet activated carbon removes oxygen from air causing a hazard to workers inside carbon vessels or confined spaces. Wash hands after handling.

**Conditions for safe storage, including any incompatibilities.**

Store in a manner to minimize airborne dust.

Protect containers from physical damage. Store in a dry, cool, well-ventilated area. Store away from strong oxidizers, strong acids, ignition sources, combustible materials, and heat. An adequate air gap between packages is recommended to reduce propagation in the case of fire. Storage class: (TRGS510) - 13 Non-combustible solids.

**Handling:**

A hazard assessment should be carried out. As with all finely divided materials, ground all transfer, blending and dust collecting equipment to prevent static discharge. Remove all strong ignition sources from material handling, transfer, and processing areas where dust may be present or accumulate. Practice good housekeeping. Excessive accumulations of dust or dusty conditions can create the potential of secondary explosions. Inspection of hidden surfaces should be made routinely. If possible, eliminate the pathways for dust to accumulate in hidden areas. Fine carbon dust may penetrate electrical equipment and cause electrical shorts. Where dusting is unavoidable, dust-proof boxes and regular electrical line maintenance are recommended. Refer to NFPA standards 654 for guidance.

**Caution Employees:**

No smoking in carbon storage and handling areas. Carbon is difficult to ignite, however, cutting and welding operations should be carried out using hot work permit systems where precautions are taken not to ignite carbon, which may smolder undetected.

**Specific end uses:**

No other specific end uses are stipulated.



**SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION**

**OSHA permissible exposure limit (PEL), American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV), and any other exposure limit used or recommended by the chemical manufacturer, importer, or employer preparing the safety data sheet, where available.**

<u>COMPONENTS</u>	<u>OSHA PEL</u>	<u>NIOSH REL</u>	<u>ACGIH TLV</u>	<u>MFG REG</u>
Activated Carbon	None established*	Not applicable.	2mg/m <sup>3</sup> TLV, 8-hr. TWA (respirable particulate matter)	Not applicable

\*Except for the state of California, where the PEL for Activated Carbon is 10mg/m<sup>3</sup> total dust, 5 mg/m<sup>3</sup> respirable fraction (8-hr TWA), there is no specific regulatory standard for Activated Carbon in the U.S. OSHA's "Particulate Not Otherwise Regulated (PNOR)" standard [29 CFR 1910.1000, Subpart Z, Air Contaminants] applies generally - **Total Dust 15 mg/m<sup>3</sup>; Respirable Fraction 5 mg/m<sup>3</sup>.**

**Appropriate engineering controls.**

Use engineering controls such as local exhaust ventilation, point of generation dust collection, down draft work stations, emission controlling, emission controlling tool designs, and materials handling equipment designed to minimize airborne fiber emissions.

**Individual protection measures, such as personal protective equipment.**

**Skin Protection:**

Wear personal protective equipment (e.g gloves), as necessary to prevent skin irritation. Washable or disposable clothing may be used. If possible, do not take unwashed clothing home. If soiled work clothing must be taken home, employees should be informed on best practices to minimize non-work dust exposure (e.g., vacuum clothes before leaving the work area, wash work clothing separately, and rinse washer before washing other household cloths).

**Eye Protection:**

As necessary, wear goggles or safety glasses with side shields.

**Respiratory Protection:**

When engineering and/or administrative controls are insufficient to maintain applicable workplace exposure controls, found in OSHA 29 CFR 1910.134 or European Standard EN149, use NIOSH/MSHA approved respiratory protection.





**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.

The evaluation of workplace hazards and the identification of appropriate respiratory protection is best performed, on a case by case basis, by a qualified Industrial Hygienist.

**Environmental Exposure Controls:**

No special environmental precautions required. Avoid release to the environment.

**Other Information:**

- Concentrations based upon an eight-hour weighted average (TWA) as determined by air samples collected and analyzed pursuant to NIOSH method 7400 (B) for airborne fibers.

**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance:</b>	Black felt or cloth	<b>pH:</b>	Not available
<b>Odor:</b>	Odorless	<b>Vapor pressure:</b>	Not available
<b>Odor threshold:</b>	Not available	<b>Vapor density:</b>	Not available
<b>Melting point:</b>	Not available	<b>Relative density:</b>	28-33 lb/ft <sup>3</sup>
<b>Initial boiling point / range:</b>	Not available	<b>Solubility:</b>	Insoluble
<b>Flash point:</b>	Not available	<b>Auto-ignition temperature:</b>	Not available
<b>Evaporation rate:</b>	Not available	<b>Decomposition temperature:</b>	Not available
<b>Flammability:</b>	Not available	<b>Viscosity:</b>	Not available
<b>Upper/lower flammability or explosive limits:</b>	Not available	<b>Partition coefficient (n-octanol/water):</b>	Not available

**Combustible dust:**

These products may contain combustible dusts. May form combustible dust concentrations in air. All powdered activated carbons are weakly explosive. No specific information on these carbons are available as they are provided in solid form (felt or cloth). Avoid and minimize dust generation.

**Typical combustible data for a variety of activated carbons:**

K<sub>st</sub> values reported between 43-113 (various sources)



**Dust explosion class St1:**

(K<sub>st</sub> values < 200 are Class St1-weakly explosive)

**MEC (Minimum explosible concentration) in air:**

50 and 60 g/m<sup>3</sup> (two reports)

**Volatile content (by weight):**

< 8% ASTM D3175-11 (Watercarb)

**MIT (minimum ignition temperature):**

Values reported between 400-680°C (752-1256°F) (four reports).

**Maximum Absolute Explosion pressure:**

Values reported between 6.0-8.6 bar (four reports).

**Typical combustible data for a variety of activated carbons:**

K<sub>st</sub> values reported between 43-113 (various sources)

**SECTION 10 - STABILITY AND REACTIVITY**

<b>Reactivity:</b>	The product is stable and non-reactive under normal conditions of use, storage and transport. Contact or mixture with oxidizing agents, such as nitric acid may cause ignition or explosion.
<b>Chemical stability:</b>	This product is stable under normal conditions of storage, shipment, and use. Avoid storing at high temperatures or in direct sunlight.
<b>Possibility of hazardous reactions:</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid:</b>	Avoid temperatures exceeding the decomposition temperature and contact with incompatible materials.
<b>Incompatible materials:</b>	Contact with strong oxidizers such as ozone, liquid oxygen, chlorine, permanganate, etc may result in rapid combustion.
<b>Hazardous decomposition products:</b>	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.



**SECTION 11 - TOXICOLOGICAL INFORMATION**

**Information on Toxicological Effects:**

**Acute Toxicity**

<u>COMPONENTS</u>	<u>CAS NUMBER</u>	<u>LD50 ORAL</u>	<u>LD50 DERMAL</u>	<u>LC50 INHALATION</u>
Activated Carbon	7440-44-0	N/A	N/A	N/A

**Routes of Exposure:**

Eye contact, skin, and upper respiratory system.

**Toxicological Synergistic Products:**

Occupational exposure may cause adverse effects.

**Delayed/Immediate Effects, as well as Chronic Effects from Short/Long term Exposure.**

Skin corrosion/irritation:	Prolonged skin contact may cause temporary irritation.
Serious eye irritation/damage:	Eye contact; contact may cause irritation
Respiratory Sensitization:	Not classified
Skin Sensitization:	Not classified
Carcinogenicity:	Table below indicates if each agency has listed any ingredient as a Carcinogen.

<u>COMPONENTS</u>	<u>CAS NUMBER</u>	<u>OSHA</u>	<u>IARC</u>	<u>NTP</u>	<u>ACGIH</u>	<u>MEXICO</u>
Activated Carbon	7440-44-0	Not listed	Not listed	Not listed	Not listed	Not listed

**Mutagenic Effects:** No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

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

**Developmental Effects:** No information available.

**Teratogenicity:** No information available.

**Specific Target Organ Toxicity (STOT)-Single Exposure:** Not classified.

**Specific Target Organ Toxicity (STOT)-Repeated Exposure:** Not classified.



<b>Aspiration:</b>	Not an aspiration hazard.
<b>Symptoms / Effects, Both Acute and Delayed:</b>	Prolonged inhalation may be harmful.
<b>Endocrine Disruptor Information:</b>	No information available.
<b>Symptoms:</b>	Irritation and redness of eyes, irritation of skin and respiratory system may result from exposure to carbon dust.
<b>Other adverse effects:</b>	No other specific acute or chronic health impact noted. The toxicological properties have not been fully investigated.

## **SECTION 12 - ECOLOGICAL INFORMATION**

<b>Ecotoxicity</b>	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 effects on the environment.
<b>Persistence and degradability:</b>	No data is available on the degradability of this product.
<b>Bioaccumulative potential:</b>	No information available. Aquatic toxicity- not expected to be harmful to aquatic organisms.
<b>Mobility in soil:</b>	No information available.
<b>Other adverse effects</b>	No adverse effects of this material on the environment are anticipated.

## **SECTION 13 - DISPOSAL CONSIDERATIONS**

### **Waste Treatment Methods:**

#### **Disposal methods:**

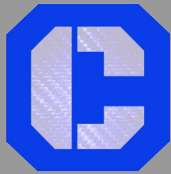
Collect and reclaim or dispose in sealed containers/plastic bagging at licensed waste disposal site. Dispose of contents/container in accordance with local, regional, national, and international regulations.

#### **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 container may retain product residue, follow label warnings even after container is emptied. Local regulations may be more stringent than state or federal requirements.

**Disposal**

This product, as manufactured, is not classified as a hazardous waste according to Federal regulations (40 CFR 261). Any processing, use, alteration or chemical additions to the product, as purchased, may alter the disposal requirements. Under Federal regulations, it is the waste generator's responsibility to properly characterize a waste material, to determine if it is a "hazardous" waste. Check local, regional, state or provincial regulations to identify all applicable disposable requirements.

**SECTION 14 - TRANSPORT INFORMATION**

UN Number:	Not applicable, See *
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group, if applicable:	Not applicable
Environmental hazards (e.g., Marine pollutant (Yes/No))	Not a marine pollutant
Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code)	Not applicable
Special precautions which a user needs to be aware of, or needs to comply with, in connection with transport or conveyance wither within or outside their premises	No information available

\*Under the UN classification for activated carbon, all activated carbons have been identified as a class 4.2 product. However, this product has been tested according to the United Nations Transport of Dangerous Goods test protocol for a "self-heating substance" (United Nations Transportation of Dangerous Goods, Manual of Tests and Criteria, Part III, Section 33.3.1.6 - Test N.4 - Test Method for Self Heating Substances) and it has been specifically determined that this product does not meet the definition of a self heating substance (class 4.2) or any other hazard class, and therefore should not be listed as a hazardous material. This information is applicable only for the Activated Carbon Product identified in this document.

<b>Canadian TDG Hazard Class &amp; PIN:</b>	Not regulated
<b>Not classified as dangerous goods under:</b>	DOT, ADR/RID, TDG (Land) IMO/IMDG (Water) IACO/IATA (Air)



SECTION 15 - REGULATORY INFORMATION

Safety, Health, & Environment Regulations / Legislation for the Substance or Mixture: International Inventories

COMPONENT	TSCA	DSL	NDSL	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 Extremely Hazardous Substances: None of the chemicals in this product have a TPQ.

SARA Codes:

311/312 Hazardous Categorization:

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

Section 313: Not regulated.

Clean Air Act: This material does not contain any hazardous air pollutants, Class 1 or 2 Ozone depleters.

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 doesn't 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 carcinogenic or reproductive toxins.

*Massachusetts* : Not regulated. *New Jersey Right to Know* : Listed.

*Pennsylvania* : Listed. *Florida* : No data.

*Rhode Island* : Not regulated. *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.
  - R38: Irritating to skin.

**Mexico-Grade:**

No information available.

**SECTION 16 - OTHER INFORMATION**

**Hazardous Materials Identification System (HMIS) Hazard Rating:**

<b>Health</b>	<b>0</b>	<b>Flammability</b>	<b>1</b>
<b>Reactivity / Physical Hazard</b>	<b>0</b>	<b>Personal Protective Equipment</b>	<b>X**</b>

**\*\*To be determined by the user**

Effective Date: August 1, 2019  
 Revision Summary: Company address updated  
 Revision Date: October 23, 2019  
 SDS Prepared By: CeraMaterials

**Disclaimer**

The information presented herein is presented in good faith and believed to be accurate as the effective date of this Safety Data Sheet. Employers may use this SDS to supplement other information gathered by them in their efforts to assure the health and safety of their employees and the proper use of the product. This summary of the relevant data reflects professional judgement; employers should note that information perceived to be less relevant has not been included in this SDS. Therefore, given the summary nature of this document, CeraMaterials does not extend any warranty (expressed or implied), assume any responsibility, or make any representation regarding the completeness of this information or its suitability for the purposes envisioned by the user.