



**CMI ENVIRONMENT**

**MATERIAL SAFETY DATA SHEET**

**EE-AC 4**

*According to 1907/2006/EC (REACH), 453/2010/EC*

*Bag 25 kg: 20242805      Big Bag 500 kg: 20242806*

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## **1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING**

### **1.1. Product Identification**

<b>Name</b>	EE-AC 4 N9
<b>Identification Number</b>	931-328-0 (EC number)
<b>Registration Number</b>	01-2119488894-16-0006
<b>Synonyms</b>	AC-HDS (high density skeleton)
<b>Issue date</b>	19-September-2016
<b>Version number</b>	01
<b>Revision date</b>	-
<b>Supersedes date</b>	-

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

<b>Identified uses</b>	Adsorbent in liquid and gas or vapor phases; carrier for catalysts.
<b>Use advised against</b>	None known.

### **1.3. Details of the supplier of the safety data sheet**

<b>Supplier</b>	CMI Europe Environnement
<b>Address</b>	1 rue des Pins, Zone d'activités du Pays de Thann, FR-68700 Aspach-Michelbach
<b>Telephone</b>	+33 389 37 41 41
<b>Fax</b>	+33 389 37 47 30
<b>Mail</b>	europe-environnement@cmigroupe.com

### **1.4. Emergency telephone number**

<b>General in EU</b>	112 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
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## **2. HAZARDS IDENTIFICATION**

### **2.1. Classification of the substance or mixture**

The substance has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

### Classification according to Regulation (EC) No 1272/2008 as amended

This substance does not meet the criteria for classification according to Regulation (EC) 1272/2008 as amended.

### Hazard summary

Not classified for health hazards. However, occupational exposure to the mixture or substance(s) may cause adverse health effects.

## 2.2. Label elements

### *Label according to Regulation (EC) No. 1272/2008 as amended*

<b>Contains</b>	Activated Carbon - High Density Skeleton
<b>Hazard pictograms</b>	None.
<b>Signal word</b>	None.
<b>Hazard statements</b>	The substance does not meet the criteria for classification.

### *Precautionary statements*

<b>Prevention</b>	Observe good industrial hygiene practices.
<b>Response</b>	Wash hands after handling.
<b>Storage</b>	Store away from incompatible materials.
<b>Disposal</b>	Dispose of waste and residues in accordance with local authority requirements.

### *Supplemental label information*

This material does not ignite easily; however, feasible precautions against dust explosion are recommended. Contact with strong oxidizers such as ozone, liquid oxygen, chlorine, permanganate, etc., may result in fire. Wet activated carbon removes oxygen from air posing a hazard to workers in enclosed or confined spaces. Before workers enter such an area or vessel containing activated carbon, the vessel's oxygen content should be determined and work procedures for potentially low oxygen areas should be followed. Spent (or used) activated carbons may exhibit properties pertaining to the adsorbed components.

## 2.3. Other hazards

May form explosible dust-air mixture if dispersed.

Not a PBT or vPvB substance or mixture.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Substances

Chemical name	%	CAS-No. / EC No.	REACH Registration No	INDEX No.	Notes
Activated Carbon - High Density - Skeleton	100	7440-44-0 931-328-0	01-2119488894- 16-0006	-	
<b>Classification</b> -					

**Composition comments** All concentrations are in percent by weight unless ingredient is a gas.  
Gas concentrations are in percent by volume.  
The full text for all H-statements is displayed in Section 16.

### 4. FIRST AID MEASURES

**General information** Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

#### 4.1. Description of first aid measures

**Inhalation** Move to fresh air. Call a physician if symptoms develop or persist. If dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device. Get medical attention immediately.

**Skin contact** Wash off with soap and water. Get medical attention if irritation develops and persists.

**Eye contact** Do not rub eyes. Rinse with water. Get medical attention if irritation develops and persists.

**Ingestion** Rinse mouth. Get medical attention if symptoms occur.

#### 4.2. Most important symptom and effects, both acute and delayed

Dusts may irritate the respiratory tract, skin and eyes. Coughing. Exposed individuals may experience eye tearing, redness, and discomfort.

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

Treat symptomatically.

## 5. FIREFIGHTING MEASURES

**General fire hazards** May form combustible dust concentrations in air.

### 5.1. Extinguishing media

#### *Suitable extinguishing media*

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO<sub>2</sub>). Apply extinguishing media carefully to avoid creating airborne dust. Avoid high pressure media which could cause the formation of a potentially explosible dust-air mixture.

#### *Unsuitable extinguishing media*

Do not use water jet as an extinguisher, as this will spread the fire.

### 5.2. Special hazard arising from the substance or mixture

Material burns slowly without flame. Activated carbon which has been allowed to smolder for a long time in a confined space may accumulate carbon monoxide above its permissible exposure limit. Do not enter permitted confined space or enclosed area without proper PPE.

High concentrations of dust may form combustible dust concentrations in air.

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

During fire, hazardous combustion products are released that may include: Carbon oxides (CO<sub>x</sub>).

### 5.3. Advices for firefighters

#### *Special protective equipment for firefighters*

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

#### *Special firefighting procedures*

In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.

### *Specific methods*

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

## 6. ACCIDENTAL RELEASE MEASURES

### 6.1. Personal precautions, protective equipment and emergency procedures

#### **For non-emergency personnel**

Keep people away from and upwind of spill/leak. Use only non-sparking tools. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Wear appropriate protective equipment and clothing during clean-up. Emergency personnel need self-contained breathing equipment. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained.

#### **For emergency responders**

Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.

### 6.2. Environmental precautions

Avoid discharge to drains and contamination of water sources or onto the ground.

### 6.3. Methods and material for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). The product is immiscible with water and will sediment in water systems. Stop the flow of material, if this is without risk.

Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste container. Following product recovery, flush area with water.

Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal.

Never return spills to original containers for re-use.

Used or spent activated carbon may contain pollutants which require the material to be treated according to specific laws or local permits and may require the use of risk management measures when handling the product.

### 6.4. Reference to other sections

For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

## 7. HANDLING AND STORAGE

### 7.1. Precautions for safe handling

Minimize dust generation and accumulation. Avoid significant deposits of material, especially on horizontal surfaces, which may become airborne and form combustible dust clouds and may contribute to secondary explosions. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Explosion-proof general and local exhaust ventilation. Avoid prolonged exposure. Do not enter storage areas or confined spaces unless adequately ventilated. Oxygen concentration should not fall below 19.5 % at sea level (pO<sub>2</sub> = 135 mmHg). Oxygen level alarms are advisable in enclosed storage areas/confined spaces containing wet activated carbon. Mechanical ventilation or local exhaust ventilation may be required. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

### 7.2. Conditions for safe storage, including any incompatibilities

Keep dry. Avoid high temperatures. Protect from direct sunlight. Keep containers tightly closed in a dry, cool and well-ventilated place. Store away from incompatible materials (see section 10 of the SDS). Access to storage of wet activated carbon should be restricted. Oxygen level alarms are advisable in enclosed storage rooms containing wet activated carbon.

### 7.3. Specifics and use(s)

Adsorbent in liquid and gas or vapor phrases; carrier for catalysts.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

#### Occupational exposure limits

##### UK. EH40 Workplace Exposure Limits (WELs)

Material	Type	Value	Form
Activated Carbon - High Density Skeleton (CAS 7440-44-0)	TWA	4 mg/m <sup>3</sup>	Respirable dust.
		10 mg/m <sup>3</sup>	Inhalable dust.

**Biological limit values** No biological exposure limits noted for the ingredient(s).

**Recommended monitoring procedures** Follow standard monitoring procedures

#### Derived no effect levels (DNELs)

##### General Population

Product	Value	Assessment factor	Notes
EE-AC 4 N9 (CAS 7440-44-0) Long-term, Systemic, Inhalation	0.9mg/m <sup>3</sup>		

##### Workers

Product	Value	Assessment factor	Notes
EE-AC 4 N9 (CAS 7440-44-0) Long-term, Systemic, Inhalation	1.84mg/m <sup>3</sup>		

**Predicted no effect concentrations (PNECs):** Not available

### 8.1. Exposure controls

#### Appropriate engineering controls

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.

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Wet activated carbon removes oxygen from air posing a hazard to workers in enclosed or confined spaces. Before workers enter such an area or vessel containing activated carbon, the vessel's oxygen content should be determined and work procedures for potentially low oxygen areas should be followed. Oxygen concentration should not fall below 19.5% at sea level (pO<sub>2</sub> = 135mmHg). Oxygen level alarms are advisable in enclosed storage areas/confined spaces containing wet activated carbon.

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

<b>General information</b>	Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.
<b>Skin protection</b>	<b>Hand protection:</b> Wear appropriate chemical resistant gloves such as Nitrile rubber; Butyl rubber. <b>Other:</b> Wear suitable protective clothing.
<b>Respiratory protection</b>	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.
<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.

### *Hygiene measures*

When using, do not eat, drink or smoke. 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.

### *Environmental exposure controls*

Environmental manager must be informed of all major releases.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

#### Appearance

<b>Physical state</b>	Solid.
<b>Form</b>	Solid particles, from microns to millimeters in size.
<b>Colour</b>	Black.
<b>Odour</b>	Odourless.
<b>Odour threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	Not available.
<b>Initial boiling point and boiling range</b>	Not applicable.
<b>Flash point</b>	Not available.
<b>Evaporation rate</b>	Not applicable.
<b>Flammability (solid, gas)</b>	Fine particles may form explosive mixtures with air

#### Upper/lower flammability or explosive limits

<b>Flammability limit – lower (%)</b>	Not available.
<b>Flammability limit – upper (%)</b>	Not available.
<b>Vapour pressure</b>	Not applicable.
<b>Vapour density</b>	Not applicable.
<b>Relative density</b>	0.1 – 1
<b>Solubility(ies)</b>	Insoluble.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not self-heating.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not applicable.
<b>Explosive properties</b>	Not explosive.
<b>Oxidising properties</b>	Not oxidising.

### 9.2. Other information

<b>Bulk density</b>	0.1 - 1 g/cm <sup>3</sup>
<b>Molecular formula</b>	C
<b>Molecular weight</b>	12.01 g/mol

# 10. STABILITY AND REACTIVITY

## 10.1. Reactivity

The product is stable and non-reactive under normal conditions of use, storage and transport.

## 10.2. Chemical stability

Material is stable under normal conditions.

## 10.3. Possibility of hazardous reactions

Contact with strong oxidizers like chlorine, liquid oxygen, permanganate, ozone, may result in rapid combustion and possible explosion. Wet activated carbon removes oxygen from air posing a hazard to workers in enclosed or confined spaces. Before workers enter such an area or vessel containing activated carbon, the vessel's oxygen content should be determined and work procedures for potentially low oxygen areas should be followed.

## 10.4. Conditions to avoid

Keep away from heat, sparks and open flame. Contact with incompatible materials. Minimize dust generation and accumulation.

## 10.5. Incompatible materials

Keep away from strong oxidizing acids; other strong oxidants.

## 10.6. Hazardous decomposition products

Thermal decomposition or combustion may produce: Carbon oxides.

# 11. TOXICOLOGICAL INFORMATION

## *General information*

Occupational exposure to the substance or mixture may cause adverse effects.

## *Information on likely routes of exposure*

<b>Inhalation</b>	Prolonged inhalation may be harmful. Prolonged and repeated overexposure to dust can lead to pneumoconiosis. Pre-existing pulmonary disorders, such as emphysema, may possibly be aggravated by prolonged exposure to high concentrations of carbon
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<b>Skin contact</b>	Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.
<b>Eye contact</b>	May irritate eyes.
<b>Ingestion</b>	May cause discomfort if swallowed. When large amounts are ingested orally, congestion may occur. However, ingestion is not likely to be a primary route of occupational exposure.

### Symptoms

Dusts may irritate the respiratory tract, skin and eyes. Exposed individuals may experience eye tearing, redness, and discomfort. Coughing.

## 11.1. Information on toxicological effects

**Acute toxicity** Not expected to be acutely toxic.

Product	Species	Test results
Activated Carbon - High Density Skeleton (CAS 7440-44-0)		
<b>Acute</b>		
<i>Inhalation</i>		
LC50	Rat	> 8.5 mg/l, 1 hours, OECD Guideline 403
<i>Oral</i>		
LD50	Rat	> 2000 mg/kg, Females, OECD Test Guideline No.423

**Skin corrosion/irritation** May cause skin irritation.  
Skin irritation: in vivo, rabbit, New Zealand White, semioclusive, shaved, 4 hours, not irritation (OECD Guideline 404).

**Serious eye damage/eye irritation:** May cause eye irritation.  
Eye irritation: in vivo, rabbit, New Zealand White, 24 hours, not irritating (OECD test guideline no.405).

**Respiratory sensitisation** Due to partial or complete lack of data the classification is not possible.

**Skin sensitisation** Skin sensitisation: in vivo (LLNA), not sensitising. (OECD TG 429) This product is not expected to cause skin sensitisation.

**Germ cell mutagenicity** In vitro gene mutation study in mammalian cells, mouse lymphoma L5178Y cells, with and without metabolic activation, results: negative (OECD Test Guideline No. 476).

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<b>Carcinogenicity</b>	Due to partial or complete lack of data the classification is not possible.
<b>Reproductive toxicity</b>	Due to partial or complete lack of data the classification is not possible.
<b>Specific target organ toxicity - single exposure</b>	Due to partial or complete lack of data the classification is not possible.
<b>Specific target organ toxicity - repeated exposure</b>	Rats were exposed to steam-activated carbon by inhalation (whole body) for 7 hours/day, 5 days/week for a period of one year at a concentration of 8.12 mg/m <sup>3</sup> . Mortality and clinical signs were recorded, gross and microscopic examination of the lungs was performed. Chronic exposure of rats to steam-activated carbon dust at a concentration of 8.12 mg/m <sup>3</sup> causes local pulmonary effects, rather than systemic effects. No NOAEC or LOAEC could be established due to the limitations of the study design.
<b>Aspiration hazard</b>	Due to the physical form of the product it is not an aspiration hazard.
<b>Mixture versus substance.</b>	The product is a substance.
<b>Other information</b>	Excessive concentrations of activated carbon may reduce visibility, cause unpleasant deposits in the eye, ears, and nasal passages, or irritate the skin or mucous membranes by mechanical means. However, normal workplace exposure has not been determined to cause a significant health effect.

## 12. ECOLOGICAL INFORMATION

### 12.1. Toxicity

Due to partial or complete lack of data the classification for hazardous to the aquatic environment, is not possible.

### 12.2. Persistence and degradability

The product is not biodegradable.

### 12.3. Bioaccumulative potential

Bioaccumulation is unlikely to be significant because of the low water solubility of this product.

**Partition coefficient n-octanol/water (log Kow)** Not available.  
**Bioconcentration factor (BCF)** Not available.

### 12.4. Mobility in soil

The product is insoluble in water and will sediment in water systems.

### 12.5. Results of PBT and vPvB assessment

Not a PBT or vPvB substance or mixture.

### 12.6. 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.

## 13. DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

<b>Residual waste</b>	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).
<b>Contaminated packaging</b>	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.
<b>EU waste code</b>	The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Disposal methods/information</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site.
<b>Special precautions</b>	Dispose in accordance with all applicable regulations

## 14. TRANSPORT INFORMATION

### ADR

14.1. - 14.6.: Not regulated as dangerous goods.

### RID

14.1. - 14.6.: Not regulated as dangerous goods.

### **ADN**

14.1. - 14.6.: Not regulated as dangerous goods.

### **IATA**

14.1. - 14.6.: Not regulated as dangerous goods.

### **IMDG**

14.1. - 14.6.: Not regulated as dangerous goods.

**Transport in bulk according to Annex II of Marpol and the IBC Code :** Not applicable.

### **General information**

Wet activated carbon removes oxygen from air posing a hazard to workers in enclosed or confined spaces. Before workers enter such an area or vessel containing activated carbon, the vessel's oxygen content should be determined and work procedures for potentially low oxygen areas should be followed.

## 15. REGULATORY INFORMATION

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

#### *EU regulations*

- Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended: Not listed.
- Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended: Not listed.
- Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended: Not listed.
- Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended: Not listed.
- Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended
- Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended: Not listed.
- Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended: Not listed.



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**Information on evaluation method leading to the classification of mixture**

Not applicable

**Full text of any H-statements not written out in full under Sections 2 to 15** None.

**Training information** Follow training instructions when handling this material.

**Further information** Chemical safety report.

### Disclaimer

*All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources. It relates specifically to the product designated and may not be valid for the product when used with any other materials or products or in a particular process.*

*The information is, to the best of our knowledge and belief, accurate and reliable as of the date compiled. However, no representation, warranty or guarantee, express or implied, is made as to its accuracy, reliability or completeness. It is the user's responsibility to review this information, satisfy itself as to its suitability and completeness, and pass on the information to its employees or customers in accordance with applicable hazard communication and GSA requirements. We do not accept responsibility for any loss or damage which may occur from the use of this information.*