

# Safety Data Sheet



according to Regulation (EC) No 1907/2006

## RAVEN 410 Carbon Black

Revision date: 04.06.2018

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### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

RAVEN 410 Carbon Black

CAS No: 1333-86-4

EC No: 215-609-9

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

##### Use of the substance/mixture

test dust

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

##### Manufacturer

Company name: Powder Technology Inc.  
Street: 1300 Grey Fox Road  
Place: USA-55112 Arden Hills, MN  
Telephone: +1 952 894 -8737  
e-mail: sales@powdertechologyinc.com  
Internet: http://www.powdertechologyinc.com

##### Supplier

Company name: fiatec Filter & Aerosol Technologie GmbH  
Street: Burgkunstadter Straße 3  
Place: D-95336 Mainleus  
Telephone: + 49 9229 99 39 - 0      Telefax: +49 9229 99 39 -10  
e-mail: info@fiatec.com  
Contact person: M.Eber      Telephone: -24  
e-mail: matthias.eber@fiatec.com  
Internet: www.fiatec.com  
Responsible Department: Managing Director

#### 1.4. Emergency telephone number:

Poison Information Centre Berlin: +(49) 30 19240

#### Further Information

This safety data sheet was created by: ECI EnviroConsult Ingenieurbüro Dr. Lux e.K.

### SECTION 2: Hazards identification

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

##### Classification according to Directive 67/548/EEC or 1999/45/EC

This substance is not classified as hazardous according to Directive 67/548/EEC.

#### 2.2. Label elements

Signal word: Warning

Pictograms: GHS07



##### Hazard statements

H332

Harmful if inhaled.

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### Precautionary statements

- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P271 Use only outdoors or in a well-ventilated area.  
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P312 Call a POISON CENTER/doctor if you feel unwell.

### 2.3. Other hazards

No information available.

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

#### Chemical characterization

carbon black with <0,1 wt% PAH

#### Hazardous components

EC No	Chemical name	Quantity
CAS No	Classification according to Directive 67/548/EEC	
Index No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	
215-609-9	Carbon Black	100 %
1333-86-4		

Full text of R, H and EUH phrases: see section 16.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### After inhalation

Provide fresh air. If breathing is irregular or stopped, administer artificial respiration.

#### After contact with skin

After contact with skin, wash immediately with: Water and soap. In case of skin irritation, seek medical treatment.

#### After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water. In case of eye irritation consult an ophthalmologist.

#### After ingestion

Rinse mouth immediately and drink plenty of water.

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

No information available.

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

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

#### Suitable extinguishing media

Foam Carbon dioxide (CO<sub>2</sub>) Extinguishing powder. Water fog.

#### Unsuitable extinguishing media

High power water jet. High power water jet.

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

In case of fire may be liberated: Carbon monoxide. Carbon dioxide (CO<sub>2</sub>). Sulfur oxides.  
It may not be obvious that carbon black is burning unless the material is stirred and sparks are

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apparent. Carbon black that has been on fire should be observed closely for at least 48h to ensure no smoldering material is present.

### **5.3. Advice for firefighters**

In case of fire: Wear self-contained breathing apparatus. Use caution when applying carbon dioxide in confined spaces. Carbon dioxide can displace oxygen.

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

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

Avoid generation of dust. Do not breathe dust. Special danger of slipping by leaking/spilling product.

### **6.2. Environmental precautions**

No special environmental measures are necessary. Clean contaminated objects and areas thoroughly observing environmental regulations.

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

Take up mechanically. Treat the recovered material as prescribed in the section on waste disposal.

### **6.4. Reference to other sections**

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

## **SECTION 7: Handling and storage**

### **7.1. Precautions for safe handling**

#### **Advice on safe handling**

Avoid generation of dust. Do not breathe dust. All work processes must always be designed so that the following is as low as possible: inhalation.

#### **Advice on protection against fire and explosion**

Avoid generation of dust. Keep away from sources of ignition. - No smoking. Fine dust may cause electrical shorts and is capable of penetrating electrical equipment unless tightly sealed.

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

#### **Requirements for storage rooms and vessels**

Keep container tightly closed. Handle and open container with care. Keep container dry. Conditions to avoid: Dust deposits.

#### **Advice on storage compatibility**

Materials to avoid: Oxidizing agents, strong.

### **7.3. Specific end use(s)**

test dust

## **SECTION 8: Exposure controls/personal protection**

### **8.1. Control parameters**

#### **DNEL/DMEL values**

CAS No	Substance	Exposure route	Effect	Value
1333-86-4	Carbon Black			
Worker DNEL,			systemic	2 mg/m <sup>3</sup>

#### **Additional advice on limit values**

Germany: MAK: 1.0 mg/m<sup>3</sup> TWA (respirable), 4.0 mg/m<sup>3</sup> TWA (inhalable)

### **8.2. Exposure controls**

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### Protective and hygiene measures

Take off contaminated clothing. Wash hands before breaks and after work. When using do not eat or drink.

### Eye/face protection

Wear eye/face protection. Suitable eye protection: Tightly sealed safety glasses.

### Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

### Skin protection

Wear suitable protective clothing.

### Respiratory protection

In case of inadequate ventilation wear respiratory protection. Suitable respiratory protective equipment: particulates filter device (DIN EN 143).

## SECTION 9: Physical and chemical properties

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

Physical state: solid  
Colour: black  
Odour: odourless

	Test method
pH-Value:	not determined
<b>Changes in the physical state</b>	
Melting point:	not determined
Initial boiling point and boiling range:	not determined
Flash point:	not applicable
<b>Flammability</b>	
Solid:	not determined
Gas:	not applicable
Lower explosion limits:	60 g/m <sup>3</sup>
Upper explosion limits:	not determined
<b>Auto-ignition temperature</b>	
Solid:	>140 °C
Gas:	not applicable
Decomposition temperature:	300 °C
<b>Oxidizing properties</b>	
Not oxidizing.	
Vapour pressure:	not determined
Density:	1,9 g/cm <sup>3</sup>
Water solubility:	insoluble
<b>Solubility in other solvents</b>	
not determined	
Partition coefficient:	not determined
Vapour density:	not determined

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Evaporation rate: not determined

### 9.2. Other information

Solid content: 100,00 %

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No hazardous reaction when handled and stored according to provisions.

### 10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

### 10.3. Possibility of hazardous reactions

No information available.

### 10.4. Conditions to avoid

none

### 10.5. Incompatible materials

Oxidizing agents.

### 10.6. Hazardous decomposition products

Sulfur oxides. Carbon monoxide. Carbon dioxide.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### Acute toxicity

CAS No	Chemical name	Exposure route	Method	Dose	Species	Source
1333-86-4	Carbon Black	oral	LD50	8000 mg/kg	Rat	
		inhalative (4 h) aerosol	LC50	>4,46 mg/l	Rat	ECHA

#### Carcinogenic/mutagenic/toxic effects for reproduction

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In 1995 IARC concluded, "There is inadequate evidence in humans for the carcinogenicity of carbon black." Based on rat inhalation studies IARC concluded that there is, "sufficient evidence in experimental animals for the carcinogenicity of carbon black," IARC's overall evaluation was that, "Carbon black is possibly carcinogenic to humans (Group 2B)". This conclusion was based on IARC's guidelines, which require such a classification if one species exhibits carcinogenicity in two or more studies. In its 1987 review IARC concluded, "There is sufficient evidence in experimental animals for the carcinogenicity of carbon black extracts." Carbon black extracts are classified as, possibly carcinogenic to humans (Group 2B). Carbon black is not designated a carcinogen by the U.S. National Toxicology Program (NTP), the U.S. Occupational Safety and Health Administration (OSHA) or the European Union (EU). The American Conference of Governmental Industrial Hygienists classifies carbon black as A4, Not Classifiable as a Human Carcinogen. The U.S. National Institute of Occupational Safety and Health (NIOSH) 1978 criteria document on carbon black recommends that only carbon blacks with PAH contaminant levels greater than 0.1% require the measurement of PAHs in air. As some PAHs are possible human carcinogens, NIOSH recommends an exposure limit of 0.1 mg/m<sup>3</sup> for PAHs in air, measured as the cyclohexane-extractable fraction.

In an experimental investigation, mutational changes in the hprt gene were reported in alveolar epithelial cells in the rat following inhalation exposure to carbon black. This observation is believed to be rat specific and a consequence of "lung overload" which led to chronic inflammation and release of oxygen species. (see Chronic toxicity above). This is thus considered to be a secondary genotoxic effect and thus carbon black itself would not be considered to be mutagenic.

### Further information

Results of epidemiological studies of carbon black production workers suggest that cumulative exposure to carbon black may result in small decrements in lung function, as measured by FEV1. A recent U.S. respiratory morbidity study suggested a 27 ml decline in FEV1 from a 1 mg/m<sup>3</sup> (inhalable fraction) exposure over a 40-year period. An older European investigation suggested an exposure to 1 mg/m<sup>3</sup> (inhalable fraction) of carbon black over a 40-year working-lifetime will result in a 48 ml decline in FEV1. In contrast, normal age related decline over a similar period of time would be approximately 1200 ml. The relationship between symptoms and exposure to carbon black is less clear. In the U.S. study, 9% of the highest exposure group (in contrast to 5% of the unexposed group) reported symptoms consistent with chronic bronchitis. In the European study, methodological limitations in the administration of the questionnaire limit the drawing of definitive conclusions about symptoms. This study, however, indicated a link between carbon black and small opacities on chest films, with negligible effects on lung function. A study of carbon black workers in the UK showed an elevated incidence of lung cancer but it was not considered to be related to carbon black.

## SECTION 12: Ecological information

### 12.1. Toxicity

The product is not: Ecotoxic.

CAS No	Chemical name	Method	Dose	[h]   [d]	Species	Source
1333-86-4	Carbon Black					
	Acute fish toxicity	LC50	>10000 mg/l	96 h	Brachydanio rerio (zebra-fish)	
	Acute crustacea toxicity	EC50	>5600 mg/l	48 h	Daphnia magna (Big water flea)	

### 12.2. Persistence and degradability

Activated sludge  
EC0 (3 h) > 800 mg/l.  
DEV L3 (TTC test)

### 12.3. Bioaccumulative potential

The product has not been tested.

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### 12.4. Mobility in soil

The product has not been tested.

### 12.5. Results of PBT and vPvB assessment

The product has not been tested.

### 12.6. Other adverse effects

No information available.

### **Further information**

Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### **Advice on disposal**

Dispose of waste according to applicable legislation.

#### **Contaminated packaging**

Wash with plenty of water. Completely emptied packages can be recycled.

## SECTION 14: Transport information

### Land transport (ADR/RID)

#### 14.1. UN number:

No dangerous good in sense of this transport regulation.

#### 14.2. UN proper shipping name:

No dangerous good in sense of this transport regulation.

#### 14.3. Transport hazard class(es):

No dangerous good in sense of this transport regulation.

#### 14.4. Packing group:

No dangerous good in sense of this transport regulation.

### 14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

### 14.6. Special precautions for user

No information available.

### 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

not applicable

## SECTION 15: Regulatory information

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

#### **National regulatory information**

Employment restrictions: Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).

Water contaminating class (D): - - not water contaminating

### 15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out.

## SECTION 16: Other information

### **Abbreviations and acronyms**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

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ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

### Relevant H and EUH statements (number and full text)

H332 Harmful if inhaled.

### Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.