



## ***Material Safety Data Sheet (MSDS) of Carbon Black***

Revision date: 2017/01/30

### **Section1: IDENTIFICATION OF SUBSTANCE AND COMPANY**

1.1. Product name: Carbon Black not activated mineral

1.2. Manufacturer/supplier: -----

ATDMCO

Address Dubai :2406 OF THE BURLINGTON TOWER, BUSINESS BAY, DUBAI-UAE

Address Turkey: İLKBAHAR MAH. GALİP ERDEM CD.FAHREDDİN PASA (613) SOKAK,

NO.6, ÇANKAYA

ANKARA/TURKEY

1.3. Use of substance/preparation:

Used for Rubber/Plastics/Paints/Printing inks and manufactured by Oil Furnace Process.

### **Section2: COMPOSITION/INFORMATION ON INGREDIENTS**

Carbon Black, amorphous (99% by weight)) Chemical formula: C

CAS number: 1333-86-4, EINECS number: 215-609-9

EU Classification: Not Classified

### **Section3: HAZARDS IDENTIFICATION**

3.1. Emergency overview: Carbon Black is odorless, insoluble and non hazardous which can burn at temperatures greater than 572°F (>300°C).



### 3.2. OSHA Regulatory Status:

This material is classified as hazardous under OSHA regulations

### 3.3. EU Regulatory Status:

Not defined as a dangerous substance according to Council Directive 67/548/EEC and its various amendments and adaptations.

### 3.4. WHMIS Regulatory Status:

This material is classified as D2A under "Canadian Worker Hazardous Materials Information System" (WHMIS) criteria.

### 3.5. Potential Health Effects

Acute Inhalation: Temporary discomfort to upper respiratory tract may occur due to mechanical irritation when exposures are well above the occupational exposure limit.

Acute Ingestion: No evidence of adverse effects from available data.

Acute eye: High dust concentrations may cause mechanical irritation to eye.

Acute skin: May cause mechanical irritation, soiling, and skin drying.

Sensitization: No cases of sensitization in humans have been reported.

### 3.6. Potential Environmental Effects:

No significant environmental hazards are associated with carbon black and it is not soluble in water. See Section 12.

## **Section 4: FIRST AID MEASURES**

4.1. Inhalation: Move affected persons into fresh air.

4.2. Skin: Wash skin with mild soap and water. If symptoms develop, seek medical attention.

4.3. Eye: Rinse eyes thoroughly with large volumes of water keeping eyelid open. If symptoms develop, seek medical attention.

4.4. Ingestion: Do not induce vomiting. If conscious, give several glasses of water.



## **Section5: Fire Fighting Measures (Self Heating Test)**

### 5.1. Flammable properties:

It may not be obvious that carbon black is burning unless the material is stirred and sparks are apparent. Carbon black that has been on fire should be observed closely for at least 48 hours to ensure no smoldering material is present

### 5.2. Extinguishing media:

Foam, carbon dioxide (CO<sub>2</sub>), dry chemical, nitrogen (N<sub>2</sub>), or water fog (a fog spray is recommended if water is used)

### 5.3. Protection of firefighters:

Wear full protective fire fighting gear including self-contained breathing apparatus.

### 5.4. Ignition in Air: Occurs above 315°C (600°F)

## **Section6: Accidental Release Measures**

### 6.1. Personal precautions:

Wear appropriate protective equipment and respiratory protection.

### 6.2. Environmental precautions:

Carbon black has no significant environmental hazards

### 6.3. Methods for clean-up:

Small spills should be vacuumed when possible. Dry sweeping is not recommended. If necessary, light water spray will reduce dust for dry sweeping, but over-wetting may produce very slippery walking surfaces. Large spills may be shoveled into containers

## **Section7: Handling and Storage**

### 7.1. Handling:

Use local exhaust ventilation or other appropriate controls to maintain exposures below the occupational limit. Precautions:

(a) Eye protection required as normal dust protection.



(b) Cotton gloves required during handling.

(c) Before entering close spaces, test for Carbon Monoxide is required. Appropriate respirator to guard against possible exposure to CO is also necessary.

7.2. Storage: Store in dry place away from ignition sources and strong oxidizers.

## **Section 8: Exposure Control/Personal Protection**

### 8.1. Exposure guidelines:

Country		Occupation l exposure Limit, mg/ 3
Australia		3.0 TWA
Canada		3.5 TWA
France		3.5 TWA
Germany	MAK	1.5 TWA (respirable) <sup>A</sup>
		4.0 TWA (inhalable) <sup>A</sup>
	TRGS 00	3.0 TWA (respirable) <sup>B</sup>
		6.0 TWA (respirable) <sup>C</sup>
		10.0 TWA(inhalable) <sup>D</sup>
Italy		3.5 TWA
Korea		3.5 TWA
Spain		3.5 TWA
United kingdo	OES	3.5 TWA (inhalable)
	STEL	7.0, 10 minutes (inhalable)
United states	OSHA- EL	3.5 TWA
	ACGIH-TLV	3.5 TWA
	NIOSH-REL	3.5 TWA

TWA = 8-hour time-weighted-average, except as noted. MAK = Maximale Arbeitsplatz-Konzentration (maximum workplace concentration) (advisory). TRGS = Technische Regeln für Gefahrstoffe (regulatory limits). OES = occupational exposure standard. STEL = short-term exposure limit. OSHA-PEL = Occupational Safety and Health Administration - Permissible Exposure Limit. ACGIH-TLV = American Conference of Governmental Industrial Hygienists-Threshold Limit Value. NIOSH-REL = National Institute of Occupational Safety and Health - Recommended Exposure Limit.

<sup>A</sup> annual average

<sup>B</sup> applies to all activities except those exempted, consult regulatory agency.

<sup>C</sup> applies to certain exempt industries, consult regulatory authority.

<sup>D</sup> effective April 2004, consult regulatory agency.



## 8.2. Engineering controls:

Use process enclosures and/or exhaust ventilation to keep dust concentrations below the applicable occupational exposure limit.

## 8.3. Personal protective equipment (PPE):

8.2.1. Eye/face protection: Safety glasses or goggles are recommended.

8.2.2. Skin protection: Wear general protective clothing to minimize skin contact. Wash hands and other exposed skin with mild soap and water.

8.2.3. Respiratory protection: Appropriate protection is required. Use a positive-pressure, air supplied respirator if there is any potential for uncontrolled release

### 8.3.4 General hygiene considerations

Emergency eyewash and safety shower should be in close proximity as a matter of good practice. Wash hands and face thoroughly with mild soap before eating and drinking.

## **Section9: Physical and Chemical Properties**

Appearance	powder or pellet
Color	black
Odor	odorless
Odor threshold	not applicable
Melting point/range	not applicable
Boiling point/range	not applicable
Vapor pressure	not applicable
Evaporation rate	not applicable
Density	(20°C) 1.7 – 1.9 g/ml
Bulk density	1.25-40 lb/ft <sup>3</sup> , 20-640 kg/m <sup>3</sup>
Pellets	200-680 kg/m <sup>3</sup>
Powder (fluffy)	20-380 kg/m <sup>3</sup>
Solubility (in Water)	insoluble
PH value (ASTM 1512)	4-11 [50 g/l water, 68°F (20°C)]
Partition coefficient (n-octane/water)	not applicable
Viscosity	not applicable
Decomposition temperature	572°F (300°C)



## **Section10: Stability and Reactivity**

- 10.1. Chemical stability: Stable under normal ambient conditions.
- 10.2. Conditions to avoid: Prevent exposure to high temperatures and open flames.
- 10.3. Materials to avoid: Strong oxidizers such as chlorates, bromates and nitrates
- 10.4. Hazardous decomposition products: Carbon monoxide, carbon dioxide, organic products of decomposition, oxides or sulfur (sulfoxides) form if heated above decomposition temperature.
- 10.5 Possibility of hazardous reaction: Will not occur.

## **Section11: Toxicological Information**

### 11.1. Acute toxicity:

Acute oral toxicity: LD50 (rat), > 8000 mg/kg

Primary skin irritation: rabbit: non-irritative, index score 0.6/8 (4.0 = severe edema)

Primary eye irritation: rabbit: non-irritative, Draize score 10-17/110 (100 = maximally irritating)

### 11.2. Sub chronic toxicity:

Rat, inhalation, duration 90 days, NOAEL = 1.0 mg/m<sup>3</sup> (respirable) Target organ: lungs; inflammation, hyperplasia, fibrosis

### 11.3. Chronic toxicity:

Rat, oral, duration 2 years , Effect: no tumors Mouse, oral, duration 2 years Effect: no tumors

Mouse, dermal, duration 18 months Effect: no skin tumors Rat, inhalation, duration 2 years

Target organ: lungs                      t: inflammation, fibrosis, tumors

### 11.4. Carcinogenicity:

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*

11.5. Sensitization: No animal data available.

## **Section 12: Ecological Information**

### 12.1. Mobility:

Not soluble in water. Not expected to migrate expected to remain on soil surface.

### 12.2. Bio-accumulation:

Bioaccumulation is not expected due to physicochemical properties of the substance.

### 12.3. Aquatic toxicity:

Acute fish toxicity: LC50 (96 h) > 1000mg/l, Species:

Brachydanio rerio (zebrafish), Method: OECD

Guideline 203

Acute invertebrate toxicity: EC50 (24 h) > 5600 mg/l. Species: Daphnia magna (waterflea),

Method: OECD Guideline 202

Acute algae toxicity: EC 50 (72 h) >10,000 mg/l, NOEC 50 >10,000 mg/l

Species: Scenedesmus subspicatus,

Method: OECD Guideline 201

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

## **Section 13: Disposal Considerations**

13.1. Disposal: Product can be burned in suitable incineration plants or disposed of in a suitable landfill in accordance with the regulations issued by the appropriate local authorities.

13.2. Container/Packaging: Return reusable containers to manufacturer. Paper bags may be incinerated, or recycled, or disposed of in an appropriate landfill in accordance with national and local laws.



#### **Section 14: Transport Information**

Carbon black is not restricted for transport by the following regulations: Canadian

Transport of Dangerous Goods (TDG)

European Carriage of Dangerous Goods by Rail (RID), by Road (ADR), or on the Rhine (ADNR)

International Air Transport Association (IATA)\*

International Civil Air Organization-Technical Instructions (ICAO-TI)\* International Maritime

Dangerous Goods Code (IMDG)\*

United Nations Recommendations on the Transport of Dangerous Goods

U.S. Department of Transportation (DOT) Hazardous Materials Regulations\* International

Civil Air Organization-Technical Instructions (ICAO-TI)\*

\*Note: listed as "carbon black, non-activated, mineral origin"

International Transportation Identification: "Carbon black, non-activated, mineral origin".

Not dangerous according to IMDG-Code. Not

dangerous according to ICAO-TI. UN Number:

None

UN Proper Shipping Name: Not classified UN Shipping

Class: Not classified

UN Packing Group: Not classified US Rail

Regulations: Not classified

Additional Information:

Seven (7) ASTM reference carbon blacks were tested according to the UN method, Self Heating Solids, and found to be "Not a self-heating substance of Division 4.2"; the same carbon blacks were tested according to the UN method, Readily Combustible Solids, and found to be "Not a readily combustible solid of Division 4.1"; under current UN Recommendations on the Transport of Dangerous Goods.





## **Section 15: Regulatory Information**

Carbon Black CAS No. 1333-86-4 appears on TCSA Inventory (U.S.), EINECS (Europe), CEPA (Canada), MITI (Japan) & AICS (Australia) as a chemical of commerce in this jurisdiction

## **Section 16: Other Information**

Manufactured carbon blacks generally contain less than 0.1% of solvent extractable polycyclic aromatic hydrocarbons (PAH). Solvent extractable PAH content depends on numerous factors including, but not limited to, the manufacturing process, desired product specifications, and the analytical procedure used to measure and identify solvent extractable materials.

National Fire Protection Association (NFPA) Rating:

Health: 0

Flammability: 1

Reactivity: 0

0 = minimal, 1 = slight, 2 = moderate, 3 = serious, 4 = severe

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Hazardous Materials Identification System<sup>®</sup> (HMIS<sup>®</sup>) Rating:

Health: 1 (designates chronic hazard)

Flammability: 1

Physical Hazard: 0

0 = minimal, 1 = slight, 2 = moderate, 3 = serious, 4 = severe

HMIS<sup>®</sup> is a registered trademark of the National Paint and Coatings Association.

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*The data and information presented herein corresponds to the present state of our knowledge and experience and is intended to describe our product with respect to possible occupational safety and health concerns. The user of this product has sole responsibility to determine the suitability of the product for any use and manner of use intended, and for determining the regulations applicable to such use in the relevant jurisdiction. This MSDS is updated on a periodic basis in accordance with applicable health and safety standards.*