micromeritics®

SAFETY DATA SHEET

Carbon Black

Date of Preparation: 02/08/2019

SDS #: 004-16107-00MSDS

SECTION 1: IDENTIFICATION

Product Identification: Carbon Black, Granulated Activated ASTM SRB 8 D
CAS Number: 1333-86-4
Volumes: 410 MESH
Other Designations: Not Applicable
Recommended Use: Additive for plastic and rubber, Pigment, Chemical reagent, Batteries, Refractories
Restrictions: For laboratory use only.
Supplier Information:

Micromeritics Instrument Corp.	Contact:	Human Resources
4356 Communications Drive	Phone:	(770) 662-3636
Norcross, GA 30093-2901 USA	Fax:	(770) 662-3696

Manufacturer: Cabot Corporation, 75 State Street, Boston, MA 02109-1806 Phone (617)342-6023 (days), (304)665-2442 (nights/weekends)

SECTION 2: HAZARDS IDENTIFICATION

GHS Classification:

Canada - Classified as a D2A under the Canadian Worker Hazardous Materials Information System.
European Union - Not hazardous substance or preparation under CLP-Regulation (EC) No. 1272/2008.
European Union - Not a hazardous substance according to Directive 67/548/EC.
United States OSHA – Classified as hazardous under 29 CFR 1910.1000, Table Z-1.

Signal word: Warning
Hazard Statement:
H228: Flammable solid
H303: May be harmful if swallowed
H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335: May cause respiratory irritation
H351: Possibly suspected of causing cancer

Pictograms:

Precautionary Statements:

Prevent dust accumulations to minimize explosion hazard.
P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Potential Health Effects

Primary Entry Routes: Inhalation, Eye Contact, Skin Contact

Target Organs: Lungs

Acute Effects

Inhalation: Dust may be irritating to respiratory tract. Provide appropriate local exhaust ventilation at machinery and at places where dust can be generated.
Eye: May cause mechanical irritation. Avoid contact with eyes.
Skin: May cause mechanical irritation, soiling, and skin drying. Avoid contact with skin. No cases of sensitization in humans have been reported.
Ingestion: Adverse health effects are not expected.
Carcinogenicity: Carbon Black is listed as an IARC (International Agency for Research on Cancer) Group 2B substance (possibly carcinogenic to humans).
Medical Conditions Aggravated by Long-Term Exposure: Asthma, Respiratory disorder
Chronic Effects:
Inhalation: Carbon black contains less than 0.1% of adsorbed polynuclear aromatic compounds (PNA). In non-adsorbed form, some PNA's have been found to be carcinogens in certain studies.
Carbon black is considered a possible carcinogen by the International Agency for Research on Cancer (IARC) but is not listed as a human carcinogen by NTP, ACGIH, OSHA, or the European Union. ACGIH listed carbon black as an A3 Confirmed animal carcinogen with unknown relevance to humans: Available evidence does not suggest that the agent is likely to cause cancer in humans except under uncommon or unlikely routes or levels of exposure. .

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient Name	CAS Number	% wt
Carbon Black	1333-86-4	100.0

Trace Impurities:

	OSHA PEL		ACGIH TLV		NIOSH REL		NIOSH
Ingredient	**TWA**	**STEL**	**TWA**	**STEL**	**TWA**	**STEL**	**IDLH**
Carbon Black	3.5 mg/m^3	none estab.	3.5 mg/m^3	none estab.	none estab.	none estab.	none estab.

SECTION 4: FIRST-AID MEASURES

Inhalation: Move victim to fresh air.

Eye Contact: Flush eyes immediately with large amounts of water for 15 minutes. Seek medical attention if symptoms develop.

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

Ingestion: Do not induce vomiting. If conscious, give several glasses of water. Never give anything by mouth to an unconscious person.

Note to Physicians: Treat symptomatically

Special Precautions/Procedures: Not Applicable

SECTION 5: FIRE-FIGHTING MEASURES

Flammability Classification: Class A

Extinguishing Media: Use foam, carbon dioxide (CO2), dry chemical or water spray. A fog is recommended if water is used.

Unusual Fire or Explosion Hazards: Carbon monoxide and carbon dioxide are products of combustion. Use appropriate respirator for protection against possible exposure to CO or CO2. It may not be obvious that the carbon black is burning unless the material is stirred and sparks are apparent.

Hazardous Combustion Products: Not Applicable

Fire-Fighting Instructions: Normal fog or nozzle jet application and/or exclusion of air.

Fire-Fighting Equipment: Wear suitable protective equipment. In the event of fire, wear self-contained breathing apparatus. Wet carbon black produces very slippery walking surfaces.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Spill /Leak Procedures: Carbon black is not a hazardous waste under US Federal RCRA Regulation. Wear NIOSH approved Dust Protection Respirator, if needed. Spills should be removed by vacuuming, or spraying with water and sweeping mixture into a suitable container.

Small Spills: Use of a vacuum with high efficiency particulate air (HEPA) filtration is recommended. Do not create a dust cloud by using a brush or compressed air. Dry sweeping is not recommended. Water spray will produce very slippery walking surfaces and will not result in satisfactory removal of carbon black contamination. Pick up and transfer to properly labelled containers.

Large Spills

Containment: Prevent further leakage or spillage if safe to do so.

Cleanup: If the spilled material contains dust or has the potential to create dust, use explosion-proof vacuums and/or cleaning systems suitable for combustible dusts. Use of a vacuum with high efficiency particulate air (HEPA) filtration is recommended. Do not create a dust cloud by using a brush or compressed air. Dry sweeping is not recommended. Water spray will produce very slippery walking surfaces and will not result in satisfactory removal of carbon black contamination. Pick up and transfer to properly labelled containers.

Regulatory Requirements: Carbon black poses no significant environmental hazards. As a matter of good practice, minimize contamination of sewage water, soil, groundwater, drainage systems, or bodies of water

SECTION 7: HANDLING AND STORAGE

Handling Precautions: Before entering closed vessels and confined spaces, test for possible elevated levels of CO. Wear appropriate respirator to guard against possible exposure to CO, CO2, or lack of adequate oxygen supply. Avoid contact with skin and eyes. Do not breathe dust. Provide appropriate exhaust ventilation at machinery and at places where dust can be generated. Do not create a dust cloud by using a brush or compressed air. Fine dust is capable of penetrating electrical equipment and may cause electrical shorts. Take precautionary measures against static discharge. If hot work (welding, torch cutting, etc.) is required the immediate work area must be cleared of carbon black product and dust.

Storage Requirements: Keep in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition. Do not store together with strong oxidizing agents. Do not store together with volatile chemicals as they may be adsorbed onto product. Keep in properly labeled containers.

Regulatory Requirements: Not Applicable

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Ensure adequate ventilation to maintain exposures below occupational limits. Provide appropriate exhaust ventilation at machinery and at places where dust can be generated.
Ventilation: Sufficient ventilation, in volume and pattern, to maintain exposure below TLV.
Administrative Controls: Not Applicable
Respiratory Protection: None in normal handling. Wear NIOSH approved respirator for nuisance dust when dust levels exceed TLV.
Protective Clothing/Equipment: Gloves: None required. Eye Protection: None required.
Safety Stations: Not Applicable
Contaminated Equipment: Not Applicable
Comments: Not Applicable
Hygienic Practices: Wash exposed skin for hygienic purposes. Most skin irritation attributed to carbon black has been found to be due to the soap used for wash up. A mild unscented soap should be used.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Flash Point: > 500°C
Flash Point Method: Closed cup
Burning Rate: Not Applicable
Autoignition Temperature: Not Applicable
LEL: Not Applicable
UEL: Not Applicable
Physical State: Solid
Appearance and Odor: Amorphous black solid, no odor
Odor Threshold: Not Applicable
Vapor Pressure: Not Applicable
Water Solubility: Insoluble
Other Solubilities: Not Applicable
Boiling Point: Not Applicable
Freezing/Melting Point: Not Applicable

Vapor Density (Air=1): Not Applicable
Formula Weight: Not Applicable
Density: 1.7-1.9 g/cm3 @ 20 °C
Specific Gravity (H2O=1): 1.7 - 1.9
pH: >7 [50 g/l water, 68ºF (20ºC)]

Viscosity: Not Applicable
Refractive Index: Not Applicable
Surface Tension: Not Applicable
% Volatile: Not Applicable
Evaporation Rate: Not Applicable

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable
Polymerization: Not Applicable
Chemical Incompatibilities: strong oxidizers such as chlorates, bromates, and nitrates
Conditions to Avoid: Excessive heat or flame. Do not expose to temperatures above 300°C. May react upon contact with strong oxidizers such as chlorates, bromates and nitrates.
Hazardous Decomposition Products: Carbon monoxide, carbon dioxide and small amounts of sulfur containing gases when burning.

SECTION 11: TOXICOLOGICAL INFORMATION

Toxicity Data:
Acute Effects:

Oral LD50: LD50/oral/rat = > 8000 mg/kg.
Inhalation LC50: No data available.
Dermal LD50: No data available.
STOT - Single Exposure: None observed.
Eye Irritation: Rabbit. Draize score 10-17/110 @ 24 hr. Non-irritating.
Skin Irritation: Rabbit. 0.6/8. Slight irritation. @ 24 hr. Non-irritating. @ 48 hr.

Chronic Effects:

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
Mouse/Hamster, inhalation, duration 12-24 months. Effect: no lung tumors
Rat, inhalation, duration: 2 years Target organ: lungs Effect: inflammation, fibrosis, tumors

Note: Tumors in the rat lung are related to the fine particle overload phenomenon rather than to a specific chemical effect of the dust particles in the lung. These effects in rats have been reported in studies on other inorganic insoluble particles and appear to be species specific. Tumors have not been observed in other species (i.e., mouse and hamster) for other insoluble particles under similar circumstances and study conditions.

Carcinogenicity: Carbon black is considered a possible carcinogen by the International Agency for Research on Cancer (IARC) but is not listed as a human carcinogen by NTP, ACGIH, OSHA, or the European Union.

Mutagenicity: Carbon black is not suitable to be tested in bacterial (Ames test) and other in vitro systems because of its insolubility. However, when organic solvent extracts of carbon black have been tested, results showed no mutagenic effects. Organic solvent extracts of carbon black can contain traces of polycyclic aromatic hydrocarbons (PAHs). A study to examine the bioavailability of these PAHs showed that PAHs are very tightly bound to carbon black and not bioavailable. (Borm, 2005)
Teratogenicity: Not Applicable

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity: Fish (Brachydanio rerio): LC50 (96hr) > 1,000 mg/L. (Method: OECD 203).
Daphnia magna: EC50 (24hr) > 5,600 mg/L. (Method: OECD 202).
Algae (Scenedesmus subspicatus): EC50 (72hr) > 10,000 mg/L.
Algae (Scenedesmus subspicatus): NOEC >= 10,000 mg/L (Method: OECD 201).
Activated sludge: EC0 (3hr) >= 800 mg/L. (Method: DEV L3 TTC test).
Environmental Fate: Bioaccumulation not expected due to physicochemical properties of the substance.
Environmental Degradation: The methods for determining biodegradability are not applicable to inorganic substances.
Soil Absorption/Mobility: Insoluble. Expected to remain on soil surface. Not expected to migrate.

SECTION 13: DISPOSAL CONSIDERATIONS

Disposal: Product can be burned in suitable incineration plants or disposed of in a suitable landfill in accordance with the regulations of the appropriate federal, provincial, state and local authorities..
Disposal Regulatory Requirements: Not Applicable
Container Cleaning and Disposal: Not Applicable

SECTION 14: TRANSPORT INFORMATION

DOT Transportation Data (49 CFR 172.101):

Shipping Name: Not regulated
Shipping Symbols: Not Applicable
Hazard Class: Not regulated
ID No.: Not regulated
Packing Group: Not Applicable
Label: Not Applicable
Special Provisions (172.102):
Not Applicable

Packaging Authorizations
a) Exceptions: Not Applicable
b) Non-bulk Packaging: Not Applicable
c) Bulk Packaging: Not Applicable

Quantity Limitations
a) Passenger, Aircraft, or Railcar: Not Applicable
b) Cargo Aircraft Only: Not Applicable

Vessel Stowage Requirements
a) Vessel Stowage: Not Applicable
b) Other: Not Applicable

Canadian TDG Hazard Class & PIN – Not regulated

SECTION 15: REGULATORY INFORMATION

Hazard Classification
United States - OSHA (29 CFR 1910.1200): Hazardous
Mexico - NOM-018-STPS-2000: Not hazardous
Mexico - NOM-018-STPS-2015: Not hazardous.
Canada - WHMIS Classification (CPR, SOR/88-66): Class D2A This product has been classified in accordance with the hazard criteria of the Controlled Products contains all the information required by the Controlled Products Regulations.
Canada - WHMIS Classification (HPR,SOR/2015-17)
This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the M/SDS contains all the information required by the Hazardous Products Regulations**.**

International Inventories
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory Complies
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List Complies
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
Complies
ENCS - Japan Existing and New Chemical Substances Complies
IECSC - China Inventory of Existing Chemical Substances Complies
KECL - Korean Existing and Evaluated Chemical Substances Complies
PICCS - Philippines Inventory of Chemicals and Chemical Substances Complies
AICS - Australian Inventory of Chemical Substances Complies
NZIoC - New Zealand Inventory of Chemicals Complies
TCSI - Taiwan Chemical Substance Inventory Complies

US Federal Regulations
SARA 311/312 Hazard Categories

Acute Health Hazard	NO
Chronic Health Hazard	YES
Fire hazard	YES
Sudden release of pressure hazard	NO
Reactive Hazard	NO

See GHS classification in section 2 for applicable SARA 311/312 hazard categories under the revised 40 CFR 370 (June 13, 2016)

SARA Section 313 (40 CFR 372) Toxics Release Inventory

Under EPA's Toxics Release Inventory (TRI) program, the reporting threshold for the polycyclic aromatic compounds (PAC) category is 100 pounds/year manufactured, processed, or otherwise used. The 100 pounds/year reporting threshold applies to the cumulative total of 25 specific PACs. In addition, the TRI reporting threshold for benzo(g,h,i)perylene is 10 pounds/year manufactured, processed, or otherwise used. Carbon black may contain certain PACs and/or benzo(g,h,i)perylene. The user is advised to evaluate their own TRI reporting responsibilities.

Clean Air Act Amendments of 1990
(CAA, Section 112, 40 CFR 82): This product does not contain any components listed as a Hazardous Air Pollutant, Flammable Substance, Toxic Substance, or Class 1 or 2 Ozone Depletor

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Product code: CB STD Product name: CARBON BLACK Revision date: 29-Jan-2018 Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

California Proposition 65
This product contains the following Proposition 65 chemicals.
"Carbon black (airborne, unbound particles of respirable size)" is a California Proposition 65 listed substance. Please note that all three listing qualifiers (airborne, unbound (not bound within a matrix), and respirable size (10 micrometers or less in diameter)) must be met for this substance to be considered a Proposition 65 substance. Please contact your sales representative for additional information.
Certain polycyclic aromatic hydrocarbons (PAHs) that may be found adsorbed onto the surface of carbon black are California Proposition 65 listed substances.
“Carbon-black extracts” is a California Proposition 65 listed substance.
Certain metals, including arsenic, cadmium, lead, mercury, or nickel, may be present on and/or in carbon black and are California Proposition 65 listed substances.

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania	Louisiana
Carbon Black 1333-86-4	**X**	**X**	**X**	**X**

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SECTION 16: OTHER INFORMATION

Prepared By: Zuniga, A.

Revision Notes:

REV	REVISION DESCRIPTION	BY	DATE	CHK	REL. NO
D	Add pictograms and update to EU reach	TP	02/08/19		190053
C	Update to new standard	AZ	10/24/14	JM	140435
B	Revision	JAP	06/16/04	JM	040248
A	Revision	MD	02/28/03	JM	030120
-	Formal Release	ADG	09/07/00	JP	000120D

Additional Hazard Rating Systems: Not Applicable

Disclaimer: The information presented herein is believed to be accurate and was obtained from sources believed to be reliable. However, the information is provided without any representation or warranty, expressed or implied, with respect to its accuracy or completeness. It is the users' responsibility to determine the suitability of this product and the relevance of this information for their use.

Hazard Determination Statement:

The hazardous characteristics of this product has been determined by the manufacturer of this product.