

**Section 1 Identification**

Product Identifier	BLACK-7	CAS#	Mixture
Product Description	Aqueous dispersion of carbon black and anionic dispersing additive.		Active Solids = 32.0%
Synonym(s)	(Active chemical) Carbon Black; Furnace Black CAS#1333-86-4		
Relevant Uses	Additive/filler for rubber, paper and various applications.		
Uses advised against	Not applicable.		
Company	Aardvark Colors 245 Kent Ave, Brooklyn, NY 11249	Tel.	(718) 599-7857

Section 2 Hazard Identification

OSHA Regulatory Status	<u>Non-Hazardous</u>	Carbon black's combustible dust hazard is minimized as an aqueous dispersion.*
GHS Classification	<u>Mixture</u>	Not classified
GHS Pictogram(s)	None	
Signal Word	None	Percentage of mixture consisting of ingredients of <u>unknown</u> toxicity: 0%
Hazard Statements	None	
Precautionary Statement	Prevent the formation and/or accumulation of dust from dried material to minimize explosive dust-air combustion hazards. Keep dust formations away from ignitions sources including heat, sparks and flame.	
OSHA- HNOC	*Avoid creating dusts when processing carbon black as OSHA Hazard Standard (29 CFR 1910.1200) regulates all powdered forms as hazardous "Combustible Dust". WARNING- May form combustible dust concentrations in air. Keep away from all ignition sources including heat, sparks and flame. Prevent dust accumulations to minimize explosive hazard. Do not expose to temperatures above 300°C. Hazardous byproducts of combustion can include oxides of carbon, sulfur and organic products.	

HMIS Rating Index	Health 1	Fire 0	Reactivity 0	Personal E
	0 = Minimal	1 = Slight 2 = Moderate	3 = High	4 = Extreme
	A= Eye / Clothing	B= Eye Protection / Gloves	E= Eye Protection / Clothing / Dust Mask / Gloves	

Remarks: The customer is ultimately responsible for determining the PPE code for use of this material in their process.

Section 3 Composition and Information on Ingredients

Product Description	<u>Mixture</u>	Occupational exposure limits, are listed in Section 8.		
<u>Ingredient(s)</u>	<u>CAS#</u>	<u>% by Weight</u>	<u>Classification (of ingredient)</u>	
Water	7732-18-5	65-67	Not classified	
Carbon Black	1333-86-4	31-33	OSHA, combustible dust	
Sodium polynaphthalenesulfonate	9084-82-6	1 - 3	Not classified	

Potential Health Effects

Eyes	May cause mechanical eye irritation.
Skin	May cause mechanical skin irritation, soiling and drying of skin. Not expected to cause skin sensitization in humans.
Inhalation	Exposure to dust particles generated from dried dispersion may cause irritation of the respiratory tract.
Ingestion	Adverse effects are not expected. See Section 11.
Carcinogenicity	Carbon Black is listed by the IARC as a Group 2B substance (possibly carcinogenic to humans). See Section 11.
Target Organs	Lungs. Formed dust may aggravate existing asthma and respiratory disorders.



Section 4 First Aid Measures

Description of first-aid measures after exposure

- Eyes** Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 15 minutes. If irritation persists, call a physician.
- Skin** Wash thoroughly with soap and plenty of water removing all contaminated clothes and shoes. If skin irritation persists, call a physician. Launder clothes before reuse.
- Ingestion** **Do not induce vomiting** unless directed to do so by medical personnel. If conscious, give several glasses of water. Never give anything by mouth to an unconscious person.
- Inhalation** Unlikely as dispersion. Move exposed person to fresh air. If cough or shortness of breath or other breathing problems, move to fresh air. Seek medical attention if symptoms persist. If necessary, restore normal breathing through standard first aid measures.

Most important symptoms / potential effects, acute and delayed

The most important known symptoms and effects are described in Section 2 and/or in section 11.

Over-exposure symptoms/ adverse signs

No data/information reported by chemical manufacturer.

Indication of immediate medical attention and/or special treatment needed if necessary


Note to Physicians: Treat symptomatically.

Section 5 Fire Fighting Measures

- Remarks** This product is a water based mixture, non-flammable and not readily combustible as supplied.
- Extinguishing Media** Suitable agent(s): Water Spray Foam Carbon Dioxide Dry Chemicals
Unsuitable for extinguishing agent(s): DO NOT USE solid water stream.
- Decomposition Hazard** May form toxic and irritating fumes of oxides of carbon, and sulfur oxides.
- Advice to fire-fighters** Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
- Additional Remarks** No specific fire or explosion hazard. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. Carbon black produces very slippery walking surfaces.

Section 6-Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

- Non-Emergency** Follow good industrial hygienic practices with rubber gloves, safety goggles and an approved NIOSH dust/mist respirator when applicable. Provide adequate ventilation if necessary.
- Emergency procedure** No action should be taken involving any personnel risk without suitable training. Keep unnecessary / unprotected personnel from entering spill area. Do not touch spilled material; avoid contact with skin, eyes and clothing. Put on appropriate protective equipment, clothing and/or Tyvek type overall.
- Personal Protection** Avoid contact with skin, eyes & clothing. Put on appropriate personal protective equipment, e.g. in cases of dust generation wear a respirator. Wear chemically resistant gloves. Use suitable eye protection. Wear suitable coveralls to prevent exposure to the skin. CAUTION: Carbon black produces very slippery walking surfaces.

- Environmental** Contained spilled product if possible. Product may discolor (black) water streams and/or sewer systems if spill is not contained. Reporting may be required by local authorities.
- Spill Procedure** Prevent further leakage if possible. Spread absorbent material to contain. Spill or vacuum up and place in labeled containers. Avoid creating dust formations, as combustion hazards are possible.
- Reference** See Section 7 for information on safe handling. Section 8 for information on personal protection equipment. See Section 13 for disposal information

**Section 7 Handling and Storage****Precautions for safe handling (See Section 8 for PPE)**

Industrial hygienic Observe good practices prohibit eating, drinking and smoking in work areas. Wash after handling. Persons with a history of skin sensitization problems should not be exposed to this material. Avoid contact with eyes and skin. Launder clothes before reuse.

Conditions for safe storage, including incompatibilities

Temperature **PROTECT FROM FREEZING!** Storage temperature range 50° - 100°F recommended.

Storage Avoid storage of drum in direct sunlight. Keep drums tightly sealed until ready for use.

Incompatibles Avoid strong oxidizing agents.

Maintaining integrity of the mixture

Usage Mix thoroughly before use. Some settling of material may occur on standing. Mixing provides uniform results.

Evaporation/spoilage Reseal drums tightly when not in use to avoid evaporation, contamination and/or spoilage.

Empty drums Empty containers contain product residue and can be hazardous, check regional, national and local regulations. Do not reuse container unless you have determined compatible use.

Other remarks Spilled carbon black creates very slippery conditions, use caution walking into spill area.

Section 8 Exposure Controls and Personal Protection

Exposure Limits **No specific limits are established dispersion;** therefore in the case of brief exposure use of a respiratory filter device is recommended to maintain good industrial hygiene practices to avoid dusts formed from dried dispersion.

Recommended filter device for short-term use: US- N95 EU- Type A/P2

Component Limits	Carbon Black CAS# 1333-86-4	OSHA PEL, TWA	ACGIH TLV, TWA
	(As a Powder, and/or Dust)	3.5 mg/m ³ , TWA	3.0 mg/m ³ , Inhalable

Individual protection measures, such as personal protective equipment (PPE)

PPE Observe good practices prohibit eating, drinking and smoking in work areas. Wash thoroughly after handling. Use properly fitted dust/respirator mask. Wear chemical resistant gloves, and approved safety eye protection. Wash clothing after exposure or wear disposal covering.



Remarks Avoid prolonged or repeated skin contact. Wash thoroughly before eating, drinking, smoking or applying cosmetics. Launder clothes before reuse. End-User: Determine appropriate safety equipment relative to individual manufacturing process/use.

Appropriate engineering controls

Engineering controls are not usually necessary if good industrial hygiene practices are followed.

Section 9 Physical and Chemical Properties

Physical State	Liquid, aqueous dispersion	Color	Black
Active Solids	32.0% (±1)	Odor	None - Mild
pH @ 21°C	8.0 - 11.0	Odor Threshold	Not determined
Viscosity @ 20°C	100 – 1000 cps (#2 Spindle @ 30 rpm)	Freeze / Boiling Pt	0°C (32°F) / 100 °C (212°F) (Aqueous Portion)
Specific Gravity	~1.18	Flash Point:	Mixture is not flammable as supplied
Solubility - Water	solids within dispersion are immiscible	Melt Point:	No information available
Evaporation Rate:	~ 66.0% (as water)	Vapor Pressure / Density:	No information available
Initial / Range Boiling Point:	100°C / 212°F (water portion)	Decomposition Temperature	No information available
Auto-ignition Temperature:	Mixture is not flammable	Flammability (upper/lower limits):	Mixture is not flammable
Partition coefficient , n-octanol/water	No information available		
Other Information / Remarks	None		

**Section 10 Stability and Reactivity**

Reactivity	No specific test data related to reactivity available from the chemical manufacturer.
Chemical stability	Stable under normal conditions. Store in original container, keep drum tightly covered.
Possibility of hazardous reactions	None expected under normal conditions of storage or use, hazardous reactions will not occur.
Conditions to avoid	DO NOT FREEZE!
Incompatible materials	Avoid contact with oxidizing agents.
Hazardous decomposition products	Under normal conditions of storage & use, hazardous decomposition product not expected.
Additional information	None available

Section 11 Toxicological Information

Most likely routes of exposure handling this product using good industrial hygiene practices: Eye and skin contact.

Toxicological Effects Information

Acute toxicity	LD50 Oral	LD50 Dermal	LC50 Inhalation - 4 hr
Carbon Black- CAS# 1333-86-4	> 8000 mg/kg	No data available	No data available
Sodium polynaphthalenesulfonate, CAS# 9084-06-4	> 3800 mg/kg (Rat)	> 2000 mg/kg (Rat)	No data available

Irritation / Corrosion	Eye	Skin
Carbon Black- CAS# 1333-86-4	Rabbit- Non-irritating	Rabbit- Non-irritating
Sodium polynaphthalenesulfonate	Slight irritant	Mild irritant.

Sensitization

Carbon Black- CAS# 1333-86-4	Guinea pig skin	Not sensitizing.	Not sensitizing in animals.
	Humans	No cases of sensitization	in humans have been reported.

Germ Cell Mutagenicity

In Vitro: Carbon black is not suitable to be tested in bacteria (Ames test) and other in vitro systems because of its insolubility; however when organic solvent extracts of carbon black has been tested, where 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).

In Vivo: 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" (Driscoll, 1997) which lead to chronic inflammation and release of reactive oxygen species. This is considered to be a secondary genotoxic effect and, thus, carbon black itself would not be considered to be mutagenic.

Assessment: In vivo Mutagenicity in rats occurs by mechanisms secondary to a threshold effect and is a consequence of "lung overload", which leads to chronic inflammation and the release of genotoxic oxygen species. This mechanism is considered to be a secondary genotoxic effect and thus, carbon black itself would not be considered to be mutagenic.

Carcinogenicity	Animal Toxicity	Species	Duration	Assessment
Carbon Black	Oral	Rat	2 yrs	No tumors
CAS# 1333-86-4	Oral	Mouse	2 yrs	No tumors
	Dermal	Mouse	18 months	No skin tumors
	Inhalation	Rat	2 yrs	Inflammation, fibrosis, tumors

Note: Tumors in the rat lung are considered to be related to the "lung overload" rather than to a specific chemical effect of carbon black itself in the lung. These effects in rats have been reported in many studies on other poorly soluble inorganic particles, and appear to be rat specific (ILSI, 2000). Tumors have not been observed in other species (i.e., mouse and hamster) for carbon black or other poorly soluble particles under similar circumstances and study conditions.



Section 11 Toxicological Information (continued)

Mortality Studies **Human Data:** Based upon studies, the February 2006 Working Group at the International Agency for Research on Cancer (IARC) concluded that the human evidence for carcinogenicity was inadequate (IARC, 2010). Overall, as a results of detailed investigations, no causative link between carbon black exposure and cancer risk in humans has been demonstrated.

Reference: Sorahan 2001; Morfeld 2006; Buechte 2006; Dell 2006; Sorahan & Harrington 2007; Morfeld & McCunney 2009;

IARC Classification In 2006 IARC re-affirmed its 1995 finding that there is “inadequate evidence” from human health studies to assess whether carbon black causes cancer in humans. IARC concluded that there is “sufficient evidence” in experimental animal studies for the carcinogenicity of carbon black. IARC’s overall evaluation is that carbon black is “possibly carcinogenic to humans (Group 2B)”. This conclusion Was based on IARC’s guidelines, which generally require such a classification if one species exhibits carcinogenicity in two or more animal studies (IARC 2010).

Solvent extracts of carbon black were used in one study of rats in which skin tumors were found after dermal application and several studies of mice in which sarcomas were found following subcutaneous injection. IARC concluded that there was “sufficient evidence” that carbon black extracts can cause cancer in animals (Group 2B).

ACGIH Classification Confirmed Animal Carcinogen with Unknown Relevance to Humans (Category A3 Carcinogen).

Assessment: Applying guidelines of self-classification under Globally Harmonized System of Classification and labeling of Chemicals, carbon black is not classified as a carcinogen.

Reproductive/Developmental Toxicity No effects on reproductive organs or fetal development have been reported in long-term repeated dose toxicity studies in animals.

STOT – Single exposure Based on available data, specific target organ toxicity is not expected after single oral, inhalation, or dermal exposure.

STOT – Repeated Exposure	Animal Toxicity	Species	Duration	Assessment
Carbon Black CAS# 1333-86-4	Inhalation	Rat	90 days	NOEL
	Oral	Rat	2 yrs	NOEL = 52 mg/kg (body wt.)
	Oral	Mouse	2 yrs	NOEL = 137 mg/kg (body wt.)

Concentration (NOAEC) = 1.1 mg/m³ (respirable).
Target organ effects at higher doses are lung inflammation, hyperplasia, and fibrosis.

Although carbon black produces pulmonary irritation, cellular proliferation, fibrosis, and lung tumors in the rat under conditions of “lung overload”, there is evidence to demonstrate that this response is principally a species-specific response that is not relevant to humans.

Morbidity Studies Human data results of epidemiological studies of carbon black production workers suggest that cumulative exposure to carbon black may result in small, non-clinical decrements in lung function.

Inhalation Applying guidelines of self-classification under GHS, carbon black is not classified under STOT-RE for effects on the lung.

Oral Based on available data, specific target organ toxicity is not expected after repeated oral exposure

Dermal Based on available data and the chemical-physical properties (insolubility, low absorption potential), specific target organ toxicity is not expected after repeated dermal exposure.

Aspiration Hazard Assessment- Based on industrial experience and the data available, no aspiration hazard is expected.

Acute Toxicity Estimate	Percentage of mixture consisting of ingredients of <u>unknown</u> toxicity:	<u>0%</u>
Route	<u>Oral</u>	
ATE Value of mixture	22,093 mg/kg	



Section 12 Ecological Information

Ecological Data / Information on ecological effects		Carbon Black CAS# 1333-86-4			
Aquatic toxicity	Test	Result	Species	Exposure	Method
	LC50	> 1,000mg/L	Brachydanio rerio	96 hrs	OECD 203
	EC50	> 5,600 mg/L	Daphnia magna	24 hrs	OECD 202
	EC50	> 10,000 mg/L	Algae	72 hrs	-
	NOEC	≥ 10,000 mg/L	Algae	96 hrs	OECD 201
	ECO	≥ 800 mg/L	Activated sludge		DEV L3 TTC test
Persistence & degradability	The methods for determining biodegradability are not applicable to inorganic substances.				
Bioaccumulative potential	Not expected due to the physicochemical properties of carbon black.				
PBT / vPvB Assessment	No data available, as Carbon black does not fulfill the criteria for PBT or vPvB.				
Mobility	Carbon black is not expected to migrate, insoluble. Aqueous portion will evaporate.				
Distribution to Environment	As presented the aqueous portion of the dispersion with evaporate and/or be absorbed in soil. Carbon black being insoluble is expected to remain on the soil surface or as a dried powder float on water.				
Other adverse effects	In the dispersion form spilt product may discolor waterways and/or sewage systems.				

Section 13 Disposal Consideration

Waste treatment methods	<u>Recommendation:</u> Examine possibilities for re-utilization. Product residues and unclean empty containers should be sealed, labeled, and disposed of or recycled according to relevant national and local regulations.
Container Disposal	When unclean, empty containers are passed on; the recipient must be warned of any possible hazard that may be caused by residues. Disposal must be made according to official regulations.
RCRA Status	Not regulated, and not subject to reporting as it is not identified as a hazardous waste under 40 CFR 261.
Hazardous Waste (EU)	The (EU) classification of this product may meet the criteria for a hazardous waste. Disposal should be in accordance with regional, national and local laws and regulations.
Other information	Do not put into public waterways or sewer systems.

Section 14 Transport Information

Regulatory Info	UN No.	Proper Shipping Name	Classes	Pkg.	Remarks	Label
DOT		Not Regulated by DOT	n/a	n/a	none	n/a
ICAO / IATA		Not Regulated	n/a	n/a	none	n/a
IMDG		Not Regulated	-	-	-	-
RID / ADR		Not Regulated	-	-	-	-
IMDG Emergency Response Procedures for Ships Carrying Dangerous Goods			EMS Codes		<u>n/a</u>	<u>n/a</u>



Section 15 Regulatory Information

Safety, health and environmental regulations specific for the mixture

USA OSHA (29 CFR 1910.1200) This carbon black as supplied in an aqueous dispersion matrix is considered **non-hazardous**.

Canada – WHIS Classification (as a dry powder)	Class	Chemical Name	WHIS Ingredient Disclosure
	D2A	Carbon Black, CAS# 1333-86-4	1%

SARA Title III Hazards Notification

SARA 302/304 No components listed

SARA 311/312	<input checked="" type="checkbox"/>	Mixture contains a listed component:	Carbon Black, CAS# 1333-86-4						
		Classification of active ingredient, in original powder form:	<input checked="" type="checkbox"/> Fire hazard <input checked="" type="checkbox"/> Chronic health hazard						
SARA 313	<input checked="" type="checkbox"/>	Mixture contains a listed component:	<table border="1"> <thead> <tr> <th>Ingredient</th> <th>CAS#</th> <th>Concentration</th> </tr> </thead> <tbody> <tr> <td>Carbon Black</td> <td>1333-86-4</td> <td>32% (±1%)</td> </tr> </tbody> </table> <p>Under EPA Toxic Release Inventory (TRI) the reporting threshold for the polycyclic aromatic compounds (PAC) is 100 lbs/year manufactured, processed, or otherwise used. The 100 lbs/yr 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 lbs/year manufactured, processed, or otherwise used. Carbon black may contain certain PACs and/or Benzo [g,h,i] perylene. Based on laboratory analyses, most carbon black grades will typically have PAH levels not exceeding 0.1%. The user is advised to evaluate their own TRI reporting responsibilities.</p> <p>SARA 313 notifications must not be detached from the SDS and any copying, redistribution of the SDS shall include this notice!</p>	Ingredient	CAS#	Concentration	Carbon Black	1333-86-4	32% (±1%)
Ingredient	CAS#	Concentration							
Carbon Black	1333-86-4	32% (±1%)							

TSCA 8(b) All functional components of this product are either exempt or listed on the TSCA Inventory.

TSCA 12(b) Product does not contain any components that are subject to TSCA 12(b) Export Notification.

Clean Air Act 1990 (CAA, Section 112, 40 CFR 82) Product does not contain any components listed as a hazardous Air Pollutant, Flammable Substance, Toxic Substance or Class 1 or 2 Ozone Depletor.

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

CERCLA (CFR 302) Product does not contain any components regulated as hazardous substances.

FDA Regulations Per the Food and Drug Administration, carbon black is permitted for indirect contact with food when used as a filler in rubber articles intended for repeated use under 21 CFR 177.2600.

Limitations:

- Total carbon black (channel and furnace processed) in the rubber may not exceed 50% by weight of the rubber products. This dispersion contains a furnace process black.
- Not intended for use in contact with infant formula and milk.

Pharmaceutical Not permitted.

California Prop 65	X	Mixture contains a listed component(s):	Ingredient(s)	CAS#	Concentration
			Carbon Black	1333-86-4	32% (±1%)

•"Carbon black (airborne, unbound particles of respirable size)" is a CA Prop 65 listed substance. Please note all three listing qualifiers (airborne, unbound (not within a matrix) and respirable size (10 micrometers or less in diameter) must be met for this substance to be considered a Prop 65 listed substance.

•Certain polycyclic aromatic hydrocarbons (PAHs) that may be found adsorbed onto the surface of carbon black are CA Prop 65 listed substances.

•"Carbon-black extracts" is a CA Prop 65 listed substance.

•Certain metals, including arsenic, cadmium, lead, mercury, or nickel, may be present on and/or in carbon black, and are CA Prop 65 listed substances.



Section 15 Regulatory Information (continued)

US Right-to Know **X** **Chemical(s)** Carbon Black CAS# 1333-86-4

Appears on the following state(s) substance list: **NJ** **MA** **PA**

International Lists Active component(s) are listed or exempted on the following international inventories:

- | | |
|----------------------------------|---------------------|
| Canada (DSL / NDSL) | Korea (KECL) |
| Australia (AICS) | New Zealand (NZIoC) |
| China (IECSC) | Philippines (PICCS) |
| European Union (EINECS / ELINCS) | Taiwan (TCSI) |
| Japan (ENCS) | |

Section 16 Other Information

Other Information Carbon Black Extracts: 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. Questions concerning PAH content of the carbon black and analytical procedures should be addressed to the carbon black supplier.

Cosmetic Use: Cabot Corporation does not support the use of its carbon blacks in any cosmetic application.

Reference(s) Information compiled from raw material SDS document(s): Cabot Corporation, Rev: 29-Jan-2018

Revision Remarks New SDS / GHS Format

Date Printed 20 August 2018 **Revision Date:** 20 Aug 2018 **Supersedes:** 15 Jun 2015

Prepared By F. Steven DiMasi, VP Mfg/QA **Information Contact Number** (401) 783-5887

Abbreviation Legend			
OSHA: Occupational Safety and Health Administration	NIOSH: The National Institute for Occupational Safety and Health	ACGIH: The American Conference of Governmental Industrial Hygienists	TWA: Time weighted average
PEL: Permissible exposure limit	REL: Recommended exposure limits	TLV: Threshold limit value	STEL: Short term exposure limit
GHS : Globally Harmonized System	EINECS: European Inventory of Existing Commercial Chemical Society	ELINCS: European List of Notified Chemical Substances	CAS: Chemical Abstracts Service
IATA: International Air Transport Association	IMDG: International Maritime Code for Dangerous Goods	ICO: International Civil Aviation Organization	P: Marine Pollutant
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act	CWA: Clean Water Act	r.a.: read across	HNOC: Hazards not otherwise classified
NOEL: No observed effect level	NOEC: No observed effect concentration	STOT: Specific target organ toxicity	

Important Note:
 This information is furnished without warranty, expressed or implied, as to accuracy or completeness. The information is obtained from various sources including the manufacturer and other third party sources. The information may not be valid under all conditions nor if this material is used in combination with other materials or in any process. Final determination of suitability of any material is the sole responsibility of the user.