

Revision Date: Mar 2021



1. Product and Company Identification

Product Name:	Carbon Black
CAS#:	1333-86-4
Chemical Formula:	C
Identified uses:	Laboratory chemicals, Synthesis of substances
Contact	Beyond Battery
Information:	BLK 81 Ayer Rajah Crescent, #03-55, Singapore 139967 Email: tech@beyond-battery.com Website: https://beyondbattery.com/

2. Hazards Identification

Emergency Overview: GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Carcinogenicity (Category 2), H351

For the full text of the H-Statements mentioned in this Section, see Section 16

HMIS Rating

Health hazard: 0

Chronic Health Hazard:

Flammability: 0

Physical Hazard 0

NFPA Rating

Health hazard: 0

Fire Hazard: 0

Reactivity Hazard: 0

GHS Label elements, including precautionary statements



Pictogram

Signal

Warning

Hazard statement(s)

H351

Suspected of causing cancer.

Revision Date: Mar 2021



Precautionary statement(s)

- P201 Obtain special instructions before use.
 P202 Do not handle until all safety precautions have been read and understood.
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
 P308 + P313 If exposed or concerned: Get medical advice/ attention.
 P405 Store locked up.
 P501 Dispose of contents/ container to an approved waste disposal plant.

Hazards not otherwise classified (HNOC) or not covered by GHS

Combustible dust

3. Composition/Information on Ingredients

Substance

Synonyms: Graphitized Carbon Black, Acetylene Black

Formula: C

Molecular weight: 12.01 g/mol

CAS-No.: 1333-86-4

Hazardous Components	Classification	Concentration
Carbon Black	Carc. 2; H35	<= 100%

4. First Aid Measures

4.1 Description of first aid measures

General Advice

Move out of the dangerous area. Consult a physician. Show this to the doctor in attendance.

If inhaled

If breathed in, move the person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In the case of eye contact.

Wash off with soap and plenty of water. Consult a physician.

In case of skin contact

Flush eyes with water as a precaution.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Revision Date: Mar 2021



4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labeling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed No data available

5. Firefighting Measures

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol resistant-foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance mixture

No data available

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further Information

No data available

6. Accidental Release Measures

6.1 Personal precautions, protective equipment, and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Revision Date: Mar 2021



6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

7. Handling and Storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dust. The potential for combustible dust formation should be taken into consideration before additional processing occurs.

Provide appropriate exhaust ventilation at places where dust is formed.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

Keep in a dry place.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. Exposure Control/ Personal Protection

8.1 Control parameters

Revision Date: Mar 2021



beyond battery

Components with workplace control parameters

Component	CAS-No.	Value	Control Parameters	Basis
Carbon Black	1333-86-4	TWA	3.500000 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
	Remark	Adopted values or notations enclosed are those for which changes are proposed in the NIC See Notice of Intended Changes (NIC) Not classifiable as a human carcinogen		
		TWA	3.500000 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		TWA	3.500000 mg/m3	USA. NIOSH Recommended Exposure Limits
		TWA	0.100000 mg/m3	USA. NIOSH Recommended Exposure Limits
		Potential Occupational Carcinogen Carbon black in presence of polycyclic aromatic hydrocarbons (PAHs) See Appendix C See Appendix A		
		TWA	3.500000 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		Bronchitis Confirmed animal carcinogen with unknown relevance to humans		
			3.5 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of the workday.

Personal protective equipment

Eye/face protection

Revision Date: Mar 2021



beyond battery

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection

Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

a) Appearance	Form: Powder
	Colour: Black
b) Odor	No data available
c) Odor Threshold	No data available
d) pH	No data available
e) Melting point/freezing point	3,654 - 3,697 °C (6,609 - 6,687 °F)
f) Initial boiling point and boiling range	4,827 °C (8,721 °F)
	No data available
g) Flash point	No data available

Revision Date: Mar 2021



beyond battery

h) Evaporation rate	No data available
i) Flammability (solid, gas)	May form combustible dust concentrations in air
j) Upper/lower flammability or explosive limits	No data available
k) Vapor pressure	No data available
l) Vapor density	No data available
m) Relative density	No data available
n) Water solubility	No data available
o) Partition coefficient: n-octanol/water	No data available
p) Auto-ignition temperature	> 315 °C (> 599 °F)
q) Decomposition temperature	No data available
r) Viscosity	No data available
s) Explosive properties	No data available
t) Oxidizing properties	No data available

9.2 Other safety information

No data available.

10. Stability and Reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

No data available

10.5 Incompatible materials

Strong oxidizing agents

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

Other decomposition products - No data available

In the event of fire: see section 5

Revision Date: Mar 2021



11. Toxicological Information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - male and female - > 8,000 mg/kg

(OECD Test Guideline 401)

Inhalation: No data available

LD50 Dermal - Rabbit - > 3,000 mg/kg

No data available

Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 24 h

(OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation

(OECD Test Guideline 405)

Respiratory or skin sensitization

Guinea pig

Result: Did not cause sensitization on laboratory animals.

(OECD Test Guideline 406)

Germ cell mutagenicity

Ames test

S. typhimurium Result: negative Hamster ovary

Result: negative DNA repair Rat - female Result: negative

Carcinogenicity

Carcinogenicity - Rat - Inhalation

Tumorigenic: Carcinogenic by RTECS criteria. Lungs, Thorax, or Respiration: Tumors.

This product is or contains a component that has been reported to be possibly carcinogenic based on its IARC, ACGIH, NTP, or EPA classification.

Revision Date: Mar 2021



Limited evidence of carcinogenicity in animal studies

IARC: 2B - Group 2B: Possibly carcinogenic to humans (Carbon black)

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Additional Information

RTECS: FF5800000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. Ecological Information

12.1 Toxicity

Toxicity to fish	LC50 - Danio rerio (zebra fish) - > 1,000 mg/l - 96 h
Toxicity to daphnia and other aquatic	static test EC50 - Daphnia magna (Water flea) - > 5,600 mg/l - 24 h (OECD Test Guideline 202)
Toxicity to algae	static test EC50 - Desmodesmus subspicatus (green algae) - > 10,000 mg/l - 72 h

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

Revision Date: Mar 2021



12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

12.6 Other adverse effects

No data available

13. Disposal Considerations

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

14. Transport Information

DOT (US)

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

Revision Date: Mar 2021



15. Regulatory Information

SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

No SARA Hazards

Massachusetts Right to Know

Components	CAS-No.	Revision Date
Carbon black	1333-86-4	1991-07-01

Pennsylvania Right to Know Components

Carbon black	1333-86-4	1991-07-01
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New Jersey Right to Know Components

Carbon, mesoporous	1333-86-4	1991-07-01
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California Prop. 65 Components

WARNING! This product	1333-86-4	2003-02-21
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contains a chemical known to the State of California to cause cancer.

16. Other Information

Full text of H-Statements referred to under sections 2 and 3.

Carc. Carcinogenicity

H351 Suspected of causing cancer.

Further information

The information above is believed to be accurate and represents the best information currently available to us. However, it does not represent any guarantee of the properties of the product. We make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we shall not be held liable for any damage resulting from handling or from contact with the above product. Users should make their own investigations to determine the suitability of the information for their particular purposes.