



SAFETY DATA SHEET

Section 1: Identification of the substance / mixture and of the company / undertaking

Product Identifier: FC3203

Other Means of Identification: Flexible Carbon Conductor

Recommended use of the chemical and restrictions on use: None identified.

Supplier:

ACI Materials, Inc.
44 Castilian Drive
Goleta, CA 93117
1 (805) 324-4486

Emergency Phone Number:

For emergency health, safety and environmental information, call 1 (805) 570-1071.

Section 2: Hazards Identification

Classification of the substance or mixture:

Warning:	Flammable Liquids.	Category 4
	Serious eye damage/Eye irritation.	Category 2A
	Carcinogen.	Category 1A



Symbols:

Signal word: Danger

Hazard Statements:

- H227 Combustible liquid.
- H319 Causes serious eye irritation.
- H350 May cause cancer. Route of exposure: Inhalation.

Precautionary Statements:

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P264 Wash skin thoroughly after handling.
- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
- P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P308+311: If exposed or concerned: get medical advice/attention.
- P337 + P313: If eye irritation persists: Get medical advice/ attention.
- P370+378: In case of fire: Use CO₂, dry chemical, or foam for extinction.
- P403+235: Store in a well-ventilated place. Keep cool.
- P405 Store locked up.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulation.

Describe any hazards not otherwise classified: if converted into small particles during further handling, processing, or by other means, may form combustible dust concentrations in air.

Section 3: Composition / Information on ingredients
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Chemical Name	CAS Number	Concentration, %
Ethyl Phenyl Ketone	93-55-0	15 — 30
Graphite	7782-42-5	10 — 20
Carbon Black	1333-86-4	1 — 10

Remaining components are non-hazardous or present in amounts below reportable limits. Exact percentage values for components are proprietary in accordance with 29 CFR 1910.1200(i).

Section 4: First-aid measures

Description of First aid measures

General: If irritation or other symptoms occur or persist from any route of exposure, remove the affected individual from the area: see a physician / get medical attention.

Inhalation: Remove from exposure, lie down. If cough, dyspnea or other respiratory problems occur, bring exposed persons to fresh air. Consult a doctor in case of complaints.

Skin contact: Brush off loose particles from skin. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Obtain medical attention. If skin irritation is experienced, consult a doctor.

Eye contact: Remove contact lenses if worn. Rinse immediately with plenty of water also under the eyelids for at least 15 minutes. Get medical attention.

Ingestion: Rinse mouth with water. Do not induce vomiting. If conscious, drink plenty of water. Immediately call for medical help.

Most important symptoms/effects, acute and delayed: Breathing difficulties. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

Indication of immediate medical attention and special treatment needed: If medical advice is needed, have product container or label at hand. If necessary, oxygen respiration treatment. Acceleration of gastrointestinal passage.

Danger: May cause cancer. Route of exposure: inhalation.

Section 5: Fire-fighting measures

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical, carbon dioxide (CO₂), or nitrogen (N₂).

Unsuitable extinguishing media: Do not use a solid water jet stream as it may scatter and spread fire.

Specific hazards arising from the mixture: Carbon oxides, Sulphur oxides, organic products of decomposition. Combustible material. Flammable. Containers may explode when heated. Can pose a dust explosion hazard if dispersed in air. Avoid ignition sources. During heating or in case of fire poisonous gases are produced.

Specific protective equipment and precautions for fire-fighters: Use personal protective equipment. Wear self-contained breathing apparatus for firefighting if necessary.

Section 6: Accidental release measures

Personal precautions, protective equipment, and emergency procedures: Use personal protective equipment. Wear suitable protective clothing, gloves and eye / face protection. Avoid breathing vapors or gas. Moist industrial soot causes dangerously slick surfaces. Avoid dust formation. Ensure adequate ventilation. Evacuate personnel to safe areas. Eliminate all ignition sources. Take precautionary measures against static discharges.

Environmental Precautions: Do not allow material to enter the groundwater system. Product floats on water and does not dissolve. If possible, try to keep floating material together. If larger amounts of split material cannot be contained, local authorities should be informed. Do not allow entrance in sewage water, soil stretches of water, groundwater, drainage systems. See section 12 for additional ecological information.

Methods and materials for containment and cleaning up: Approach suspected leak areas with caution. Contain spillage. Soak up with inert absorbent material and dispose of as hazardous waste. Place in appropriate chemical waste container. Do not let this chemical enter the environment. Remove all sources of ignition.

Section 7: Handling and storage

Precautions for safe handling: Avoid contact with skin and eyes. Avoid inhalation of vapors / mist. Keep away from open flames, hot surfaces and sources of ignition. Use under well-ventilated conditions. Avoid using brooms or compressed air to avoid raising dust. Avoid breathing dust. Take measures to avoid electrostatic discharge. Provide eyewash fountains and safety showers in the work area.

Conditions for safe storage, including any incompatibilities: Keep containers tightly closed in a dry, cool and well-ventilated place. Store this material away from incompatible substances (see section 10). Keep container closed when not in use. Store material locked up. Store in correctly labeled containers.

Section 8: Exposure controls/personal protection

Control Parameters:

Component	CAS No.	Value	Control Parameter	Basis
Particulates not otherwise classified (insoluble or poorly soluble)		PEL (inhalable dust/mist)	15.0 mg/m ³	OSHA
Particulates not otherwise classified (insoluble or poorly soluble)		PEL (respirable dust/mist)	5.0 mg/m ³	OSHA
Particulates not otherwise classified (insoluble or poorly soluble)		TWA (inhalable dust/mist)	10.0 mg/m ³	ACGIH
Particulates not otherwise classified (insoluble or poorly soluble)		TWA (respirable dust/mist)	3.0 mg/m ³	ACGIH
Graphite	7782-42-5	PEL (USA)	15 mppcf* mg/m ³ *impinger samples counted by light field techn.	
Graphite	7782-42-5	REL (USA)	2.5* mg/m ³ *Respireable dust	
Graphite	7782-82-5	TLV (USA)	2.0* mg/m ³ All forms except graphite fibers; *resp. fraction	
Carbon Black, amorphous	1333-86-4	TWA (inhalable fraction)	3.5 mg / m ³	EH40 WEL
Carbon Black, amorphous	1333-86-4	STEL (inhalable fraction)	7.0 mg / m ³	EH40 WEL

Re Particulates not otherwise classified: the value is for particulate matter containing no asbestos and <1% crystalline silica (ACGIH)

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

Individual protection measures, such as personal protective equipment:

Eye / face protection: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection: Wear chemical resistant (impervious) gloves. Wear clean, chemically-resistant body-covering clothing to prevent skin exposure. When using this product, do not eat drink or smoke. Wash face and/or hands before break and end of work.

Respiratory Protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination respirator cartridges as a backup to engineering controls. If workplace exposures are exceeded respiratory protection should be used: Dust mask with P2 particle filter.

Further Information: Provide readily accessible eye wash stations and safety showers.

Section 9: Physical and chemical properties
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Appearance: Black ink.

Odor: Mild

Odor Threshold: No data available.

pH: No data available.

Melting point/freezing point: No data available.

Initial boiling point and boiling range: No data available.

Flash point: 87°C (188.6°F) (Lowest flash point of a component).

Evaporation rate: No data available.

Flammability (solid, gas): No data available.

Upper/lower flammability or explosive limits: No data available.

Vapor pressure: No data available.

Vapor density: No data available.

Relative density: 1.17 g/mL.

Solubility: No data available.

Partition coefficient: n-octanol/water: No data available.

Auto-ignition temperature: No data available.

Decomposition temperature: No data available.

Viscosity: No data available.

Other Information: Amounts listed are typical and do not represent a specification.

Section 10: Stability and reactivity

Reactivity: No data available.

Chemical stability: Stable under recommended storage conditions.

Possibility of hazardous reactions: May form combustible dust concentrations in air.

Conditions to avoid: Hot surfaces, open flames, sources of ignition and sparks.

Incompatible materials: Strong oxidizing agents, strong reducing agents, strong acids, strong bases.

Hazardous decomposition products: Carbon oxides, sulfur oxides, organic products of decomposition.

In the event of a fire: see section 5.

Section 11: Toxicological information

Information on toxicological effects:

Information on the likely routes of exposure: Ingestion. Inhalation. Eye contact. Skin contact.

Numerical measures of toxicity:

Chemical Name	Oral LD50	Species	Dermal LD50	Species
Ethyl Phenyl Ketone	4490 µL/kg	Rat	4490 µL/kg	Rabbit
Carbon Black	>8000 mg/kg	Rat	No data available	

Symptoms/effects, acute and chronic:

Ethyl Phenyl Ketone

Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

Carcinogenicity

- IARC Carbon black is considered possibly carcinogenic to humans and classified as an IARC Group 2B carcinogen because there is sufficient evidence in experimental animals with inadequate evidence in human epidemiological studies.
- 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 known or anticipated carcinogen by OSHA.

Section 12: Ecological Information

Ecotoxicity (aquatic and terrestrial, where available):

Carbon Black:

Toxicity to fish	LC0 ((Brachydanio rerio)): 1,000 mg/l Exposure time: 96 hrs Method OECD TG 203
	LC0 (Leuciscus idus melanotus): 5,000 mg/l Exposure time: 14 hrs Method: DIN 38412 Teil 15
Toxicity to daphnia and other aquatic invertebrates	EC0 (Daphnia magna): 5,600 mg/l Exposure time: 24 hrs Method OECD 202
Toxicity to algae	NOEC (scenedesmus subspicatus): 10,000 mg/l Exposure time: 3 Days Method: OECD 201
Toxicity to bacteria	EC 10 (local activated sludge): >=800 mg/l Exposure time: 3 hrs Method: DEV L3 (TTC test)

Persistence and Degradability

Ethyl Phenyl Ketone:

Insoluble in water May persist based on information available.

Section 13: Disposal Considerations

Dispose of container and unused contents in accordance with federal, state and local requirements.

Section 14: Transport Information

DOT – (US)

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

Section 15: Regulatory Information

Safety, health and environment regulations / legislation specific for the product:

U.S. federal and state regulations / legislation:

This SDS has been prepared in accordance with the hazard criteria of the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SARA 302 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 302.

SARA 311/312 Health Hazards

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 311/312.

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.

United States TSCA Inventory

All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substances Inventory.

California Proposition 65

This product contains chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

Contains trace amounts of "Quartz (SiO₂)", which is known to cause cancer.

Contains trace amounts of "Methyl Alcohol", which is known to cause developmental toxicity.

Section 16: Other Information

Revision date: June 6, 2023.

Nomenclature:

LC = Lethal concentration

LD = Lethal dose

ND = No Data

STEL = Short Term Exposure Limit

TWA = Time weighted average

WEL = Workplace Exposure Limits

Other Information

Applied Cavitation, Inc. is a registered trademark. All rights reserved.

Disclaimer Notice

This product is a complex mixture of liquids and solids. This SDS was prepared based upon the SDS of the raw materials used in the mixture.

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