



SAFETY DATA SHEET

SDS ID NO.: 0109MAR019

Revision date 03/25/2021

1. IDENTIFICATION

Product Name	Marathon Petroleum Petroleum Coke
Synonym	Petroleum Coke; Green Coke; Uncalcined coke; Thermocracked coke; Fuel grade coke
Product code	0109MAR019
Chemical family	Carbon
Recommended use	Fuel.
Restrictions on use	All others.
Manufacturer, Importer, or Responsible Party Name and Address	MARATHON PETROLEUM COMPANY LP 539 South Main Street Findlay, OH 45840
SDS Information	1-419-421-3070 (M-F; 8-5 EST)
24 Hour Emergency Telephone	CHEMTREC: 1-800-424-9300 (CCN# 13740)

2. HAZARD IDENTIFICATION

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Classification

Combustible dust	OSHA defined hazard
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Hazards Not Otherwise Classified (HNOC)

Not applicable

Label Elements

Warning

May form combustible dust concentrations in air (during processing)

Appearance Black Porous Chunks or Powder	Physical State Solid	Odor Slight Hydrocarbon
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Precautionary Statements - Prevention

Minimize dust generation and accumulation
Keep away from all ignition sources including heat, sparks and flame. No Smoking
Clean as needed to prevent hazardous accumulation or dispersion of fugitive dust
Bond and ground containers, equipment and/or conducting surfaces to minimize and dissipate electrostatic charge
When necessary, employ explosive force dissipation design to vent away from other combustibles

Precautionary Statements - Response

Avoid contact with eyes and breathing of dust.
In case of fire: Use Use portable spray hose nozzles that are listed or approved for use on Class C fire for extinction for extinction

Precautionary Statements - Storage

Store in a cool and well-ventilated area
Wetting will suppress dust release

Precautionary Statements - Disposal

Dispose of contents/container at an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Composition will vary depending on source of the final product. Polycyclic aromatic hydrocarbons, such as benzo(a)pyrene, may be present in trace concentrations (<0.1%).

Composition Information

Name	CAS Number	% Concentration
Petroleum Coke	64741-79-3	100
Sulfur Compounds	Mixture	<8
Polycyclic Aromatic Hydrocarbons	Mixture	<0.1

All concentrations are percent by weight unless material is a gas. Gas concentrations are in percent by volume.

4. FIRST AID MEASURES

First aid measures**General advice**

In case of accident or if you feel unwell, seek medical advice immediately (show directions for use or safety data sheet if possible).

Inhalation

Remove to fresh air. If not breathing, utilize bag valve mask or other form of barrier device to institute rescue breathing. If breathing is difficult, ensure airway is clear, give oxygen and continue to monitor. If heart has stopped, immediately begin cardiopulmonary resuscitation (CPR). If symptoms or irritation occur, call a physician.

Skin contact

Wash skin with plenty of soap and water. Get medical attention if irritation persists. Wash contaminated clothing before re-use.

Eye contact

Flush immediately with large amounts of water for at least 15 minutes. Gently remove contacts while flushing. Eyelids should be held away from the eyeball to ensure thorough rinsing. Gently remove contacts while flushing. Get medical attention if irritation persists.

Ingestion

Rinse mouth out with water. If symptoms develop, seek medical attention.

Most important signs and symptoms, both short-term and delayed with overexposure**Adverse effects**

Dust may be a mechanical irritant.

Indication of any immediate medical attention and special treatment needed**Notes to physician**

Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

For small fires, Class B fire extinguishing media such as CO₂, dry chemical, foam or water spray can be used. For large fires, water spray, fog or foam can be used. Do not use straight water streams to avoid spreading fire. Personnel shall be trained to use portable extinguishers in a manner that minimizes the generation of dust clouds during discharge. Firefighting should be attempted only by those who are adequately trained and equipped with proper protective equipment.

Unsuitable extinguishing media	Straight-stream nozzle patterns shall not be used on fires in areas where dust clouds can be generated.			
Specific hazards arising from the chemical	May form combustible dust concentrations in air. Fine dust dispersed in air, in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Non-sparking tools/equipment should be considered when a potentially combustible dust environment exists.			
Hazardous combustion products	Smoke, carbon monoxide, and other products of incomplete combustion.			
Explosion data				
Sensitivity to mechanical impact:	No.			
Sensitivity to static discharge:	Yes.			
Special protective equipment and precautions for firefighters	Firefighters should wear full protective clothing and positive-pressure self-contained breathing apparatus (SCBA) with a full face-piece, as appropriate. Avoid generation and accumulation of dust when handling this material. Refer to NFPA 654 Standard for Prevention of Fire & Dust Explosions. Avoid using straight water streams. Water spray and foam must be applied carefully to avoid frothing and from as far a distance as possible. Keep surrounding area cool with water spray from a distance and prevent further ignition of combustible material. Avoid excessive water spray application. Keep run-off water out of sewers and water sources.			
Additional firefighting tactics	Not applicable			
NFPA	Health 1	Flammability 1	Instability 0	Special Hazard -

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Keep people away from and upwind of spill/leak. Dust deposits dispersed into the atmosphere in sufficient concentration may form an explosive mixture. Eliminate all ignition sources. Ensure adequate ventilation.
Protective equipment	Use personal protection measures as recommended in Section 8.
Emergency procedures	Advise authorities and National Response Center (800-424-8802) if the product has entered a water course or sewer. Notify local health and pollution control agencies, if appropriate.
Environmental precautions	Avoid release to the environment.
Methods and materials for containment	Prevent dust cloud. Cover powder spill with plastic sheet or tarp, or keep wetted to minimize dispersion of powder.
Methods and materials for cleaning up	Sweep up and shovel into suitable containers for disposal. If disturbed, dust on surfaces can be dispersed and form explosive mixtures in the air, e.g. compressed air cleaning. Ensure all equipment is bonded and grounded. Use only non-sparking tools.

7. HANDLING AND STORAGE

Safe handling precautions	To avoid the combustible dust hazard, minimize dust generation and accumulation. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations and cause an electrical spark. Provide adequate precautions, such as electrical grounding and bonding, or nonreactive atmospheres. Use non-sparking tools. Avoid contact with eyes. Avoid breathing dust. Refer to applicable EPA, OSHA, NFPA and consistent state and local requirements.
Storage conditions	When stored indoors keep in a cool, well-ventilated area. Do not expose to heat, open

flames, strong oxidizers or other sources of ignition. Petroleum Coke may be stored outdoors with proper provisions for containment. Wetting will suppress dust release.

Incompatible materials Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Name	ACGIH TLV	OSHA PELS	NIOSH IDLH
Petroleum Coke 64741-79-3	TWA: 10 mg/m ³ (inhalable dust) par TWA: 3 mg/m ³ (respirable dust) Particulates, not otherwise classified	TWA: 15 mg/m ³ (total dust) TWA: 5 mg/m ³ (respirable dust) Particulates, not otherwise classified	-

Notes: No further information available.

Engineering measures Local or general exhaust required in an enclosed area or when there is inadequate ventilation. Use mechanical ventilation equipment that is explosion-proof.

Personal protective equipment

Eye protection Dust goggles if use produces excessive dust/fume concentrations.

Skin and body protection Protective disposable gloves to prevent skin exposure.

Respiratory protection Use a NIOSH approved air-purifying respirator equipped with P100 particulate filter or a supplied air respirator when there is the potential for airborne exposures to exceed permissible exposure limits or if excessive dust or fumes are generated.

Hygiene measures Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Black Porous Chunks or Powder
Physical State	Solid
Color	Black
Odor	Slight Hydrocarbon
Odor Threshold	No data available.

<u>Property</u>	<u>Values (method)</u>
pH	Not applicable
Melting Point / Freezing Point	No data available.
Initial Boiling Point / Boiling Range	No data available.
Flash Point	No data available.
Evaporation Rate	No data available.
Flammability (solid, gas)	Not applicable.
Flammability Limit in Air (%):	
Upper Flammability Limit:	No data available.
Lower Flammability Limit:	No data available.
Explosion Limits	No data available.
Vapor Pressure	No data available.
Vapor Density	No data available.
Specific Gravity / Relative Density	1.46 (0.8-1.46)
Water Solubility	Negligible
Partition Coefficient	No data available.
Autoignition Temperature	>500 °C / >932 °F
Decomposition Temperature	No data available.
Kinematic Viscosity	No data available.

VOC Content (%) No data available.
Kst 47 bar.m/s (explosion pressure build-up in meters/second) NFPA 68 2007 Table F.1b

10. STABILITY AND REACTIVITY

Reactivity The product is non-reactive under normal conditions.

Chemical stability The material is stable at 70°F (21°C), 760 mmHg pressure.

Possibility of hazardous reactions None under normal processing.

Hazardous polymerization Will not occur.

Conditions to avoid Excessive heat, sources of ignition, open flame.

Incompatible materials Strong oxidizing agents.

Hazardous decomposition products None known under normal conditions of use.

11. TOXICOLOGICAL INFORMATION

Potential short-term adverse effects from overexposures

Inhalation Inhalation of dust may cause irritation of the respiratory system.

Eye contact Dust may cause mechanical irritation of the eye.

Skin contact No known hazard in contact with skin.

Ingestion May cause irritation of the mouth, throat and gastrointestinal tract.

Acute toxicological data

Name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfur Compounds Mixture	-	-	>5 mg/l (Rat) 4 h

Immediate and delayed effects as well as chronic effects from short and long-term exposure

PETROLEUM COKE: Lifetime inhalation or dermal application of petroleum coke did not result in carcinogenicity to exposed mice. Lifetime repeated inhalation exposure of rats to petroleum coke dust resulted in signs of lung injury including fibrosis (scarring of lung tissue). Similar exposures to nonhuman primates (monkeys) caused no significant lung effects. A rat reproductive/developmental toxicity screening study of green coke did not produce effects on fertility or reproductive performance. Mutagenicity studies on petroleum coke have largely been negative.

Adverse effects related to the physical, chemical and toxicological characteristics

Signs and symptoms Dust may be a mechanical irritant.

Acute toxicity None known.

Skin corrosion/irritation None known.

Serious eye damage/eye irritation None known.

Sensitization None known.

Mutagenic effects None known.

Carcinogenicity None known.

Cancer designations are listed in the table below

Name	ACGIH (Class)	IARC (Class)	NTP	OSHA
Polycyclic Aromatic Hydrocarbons Mixture	Suspected human carcinogen(A2)	Carcinogenic to humans (1)	Reasonably anticipated to be a human carcinogen	Not Listed

Reproductive toxicity None known.

Specific Target Organ Toxicity (STOT) - single exposure None known.

Specific Target Organ Toxicity (STOT) - repeated exposure None known.

Aspiration hazard Not applicable.

12. ECOLOGICAL INFORMATION

Ecotoxicity This product is not expected to be harmful to aquatic organisms.

Name	Fish	Crustacea	Algae/aquatic plants
Petroleum Coke 64741-79-3	96-hr LL50 >1000 mg/l Fathead minnow	48-hr EL50 >1000 mg/l Daphnia magna	72-hr EL50 >1000 mg/l Algae

Persistence and degradability No information available.

Bioaccumulation No information available.

Mobility in soil No information available.

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Description of waste residues No information available.

Safe handling of wastes Handle in accordance with applicable local, state, and federal regulations.

Disposal of wastes / methods of disposal The user is responsible for determining if any discarded material is a hazardous waste (40 CFR 262.11). Dispose of in accordance with federal, state and local regulations.

Contaminated packaging disposal Empty containers should be completely drained and then discarded or recycled, if possible. Dispose of in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

DOT

UN/Identification No: Not applicable
UN Proper Shipping Name: Not Regulated
Transport Hazard Class(es): Not applicable
Packing Group: Not applicable

IATA

UN/Identification No: Not applicable
UN Proper Shipping Name: Not Regulated
Transport Hazard Class(es): Not applicable
Packing Group: Not applicable

IMDG

UN/Identification No:	Not applicable
UN Proper Shipping Name:	Not Regulated
Transport Hazard Class(es):	Not applicable
Packing Group:	Not applicable

15. REGULATORY INFORMATION

Regulatory Information

US TSCA Chemical Inventory This product and/or its components are listed on the TSCA Chemical Inventory or are exempt.

Canada DSL/NDSL Inventory This product and/or its components are listed either on the Domestic Substances List (DSL) or are exempt.

EPA Superfund Amendment & Reauthorization Act (SARA)

SARA Section 302 This product does not contain any component(s) included on EPA's Extremely Hazardous Substance (EHS) List above the de minimis threshold.

SARA Section 304 This product does not contain any component(s) identified as an EHS or a CERCLA Hazardous substance above the de minimis threshold.

SARA Section 311/312 The following EPA hazard categories apply to this product:

Combustible dust

SARA Section 313 This product does not contain component(s) in exceedance of the de minimus threshold which are subject to the reporting requirements of SARA Title III Section 313 Toxic Release Reporting (Form R).

U.S. State Regulations

California Proposition 65 This product can expose you to chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm.

Name	California Proposition 65
Polycyclic Aromatic Hydrocarbons Mixture	Carcinogen, initial date 07/01/1987

For more information, go to www.P65Warnings.ca.gov.

State Right-To-Know Regulations The following component(s) of this material are identified on the regulatory lists below:

Name	New Jersey Right-To-Know	Pennsylvania Right-To-Know	Massachusetts Right-To-Know
Petroleum Coke 64741-79-3	Listed (coke oven emissions)	Listed (coke oven emissions)	Not Listed
Sulfur Compounds Mixture	Listed	Listed	Listed
Polycyclic Aromatic Hydrocarbons Mixture	Listed	Listed	Listed

16. OTHER INFORMATION

Prepared by Toxicology & Product Safety

Revision Notes**Revision date**

03/25/2021

Revised sections

The following sections (§) have been updated:

2. HAZARD IDENTIFICATION
5. FIRE-FIGHTING MEASURES
6. ACCIDENTAL RELEASE MEASURES
8. EXPOSURE CONTROLS/PERSONAL PROTECTION
9. PHYSICAL AND CHEMICAL PROPERTIES

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is intended as guidance for safe handling, use, processing, storage, transportation, accidental release, clean-up and disposal and is not considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.