



Safety Data Sheet

Petroleum Coke

SECTION 1 IDENTIFICATION

Product Name: Petroleum Coke

Synonyms: Pet Coke, Green Coke, Delayed Coke, Thermal Cracked Coke, Sponge Coke, Shot Coke, Uncalcined Petroleum Coke

SDS #: B3

Product Use: Fuel Coke

Restrictions on Use: Use only as directed

Manufacturer:

Sinclair Oil Company
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Salt Lake City, Utah 84130

Telephone: **General Information:** (801) 524-2777 **Fax:** (801) 524-2740

Contact person: Jeremiah Webster

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SDS Date of Preparation: September 24, 2014

SECTION 2: HAZARDS IDENTIFICATION

Classification:

Physical	Health
Combustible Dust	Not Hazardous

Label Elements:

Warning!

May form combustible dust concentrations in air.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Chemical name	CAS No.	Concentration
Thermocracked Green Coke	64741-79-3	99-100%

SECTION 4 EMERGENCY and FIRST AID PROCEDURES

Eye Contact: Immediately flush eyes with water for several minutes. Get medical attention if irritation persists.

Skin Contact: Wash thoroughly with soap and water. Remove contaminated clothing and launder before reuse. Get medical attention if irritation develops or persists.

Inhalation: Remove to fresh air. Get medical attention if symptoms develop.

Ingestion: Do not induce vomiting. Rinse mouth with water. Never give anything by mouth to an unconsciousness person. Get medical attention.

Most important symptoms/effects, acute and delayed: May cause mechanical eye irritation. Prolonged skin contact may cause irritation, drying and cracking of the skin. Excessive inhalation of dust may cause irritation of the nose, throat and upper respiratory tract irritation. Swallowing may gastric upset and nausea.

Indication of immediate medical attention and special treatment, if necessary: None required under normal conditions of use.

SECTION 5 FIRE and EXPLOSION HAZARD DATA

Suitable extinguishing media: Water spray, foam, carbon dioxide, dry chemical. A solid stream of water may spread the fire.

Specific hazards arising from the chemical: The product will burn under fire conditions. Avoid generating dust. Fine dust dispersed in air in sufficient concentrations and in the presence of an ignition source is a potential dust explosion hazard. Combustion will produce carbon monoxide, carbon dioxide, sulfur oxides and hydrocarbon fragments.

Special protective equipment and precautions for fire-fighters: Firefighters should wear full emergency equipment and a NIOSH approved positive pressure self-contained breathing apparatus.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures: Wear appropriate protective equipment. Wash thoroughly after handling.

Environmental hazards: Avoid release into the environment. Report spill as required by local and federal regulations.

Methods and materials for containment and cleaning up: Dike spill and collect into closable containers for disposal with an inert absorbent. Prevent entry in storm sewers and waterways.

SECTION 7 HANDLING and STORAGE

Precautions for safe handling: Avoid contact with eyes and prolonged or repeated contact with skin and clothing. Avoid breathing dust. Wash thoroughly after handling. Minimize dust generation and accumulation. Housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Do not use compressed air to clean surfaces.

Keep away from heat, sparks and all sources of ignition. Do not smoke in areas where the products is used or stored. Provide grounding and bonding during transfer to reduce the possibility of fire or explosion. Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids and NFPA 69, Standard on Explosion Prevention Systems.

Conditions for safe storage, including any incompatibilities: Store in a cool area away from oxidizing agents. Protect containers from physical damage.

Empty containers retain product residues. Follow all SDS precautions in handling empty containers.

SECTION 8 EXPOSURE CONTROLS and PERSONAL PROTECTION

Exposure Guidelines:

INGREDIENTS

Petroleum Coke

EXPOSURE LIMITS

5 mg/m³ TWA OSHA PEL respirable fraction

15 mg/m³ TWA OSHA PEL total dust

Appropriate engineering controls: Good general room ventilation (equivalent to outdoors) should be adequate under normal conditions. If the recommended exposure limit is exceeded increased mechanical ventilation such as

local exhaust may be required. Dust control equipment such as local exhaust ventilation or material transport systems handling coke should contain explosion relief vents or explosion suppression systems.

Respiratory protection: None needed under normal use conditions with adequate ventilation. If exposures are excessive, use a NIOSH approved respirator with dust/mist cartridges. Selection of respiratory protection depends on the contaminant type, form and concentration. Select in accordance with OSHA 1910.134 and good Industrial Hygiene practice.

Skin protection: Work gloves are recommended to avoid prolonged skin contact. .

Eye protection: Wear chemical safety goggles if contact with dust is possible.

Other: Wear protective clothing if needed to avoid prolonged skin contact. Suitable washing facilities should be available in the work area.

SECTION 9 PHYSICAL and CHEMICAL PROPERTIES

Appearance (physical state, color, etc.): Black particles or lumps

Odor: Faint hydrocarbon odor.

Odor threshold: Not available	pH: Not applicable
Melting point/Pourpoint: - Not applicable	Boiling Point: Not applicable
Flash point: Not applicable	Evaporation rate: Not applicable
Flammability (solid, gas): Combustible dust	
Flammable limits: LEL: Not applicable	UEL: Not applicable
Vapor pressure: Not applicable	Vapor density: Not applicable
Relative density: 1.0-1.8	Solubility: Insoluble in water
Partition coefficient: n-ctanol/water: Not available	Auto-ignition temperature: Not available
Decomposition temperature: Not available	Viscosity: Not applicable

SECTION 10 STABILITY and REACTIVITY

Reactivity: This product is not expected to be reactive. Airborne dust may become flammable or explosive.

Chemical stability: The product is stable.

Possibility of hazardous reactions: None known.

Conditions to avoid: Avoid creating and accumulating dust.

Incompatible materials: Avoid strong oxidizing agents.

Hazardous decomposition products: Thermal decomposition may yield carbon monoxide, carbon dioxide, sulfur oxides and hydrocarbon fragments.

SECTION 11 TOXICOLOGICAL INFORMATION

Health Hazards:

Inhalation: Excessive inhalation dust may cause nose, throat and upper respiratory tract irritation.

Skin Contact: Prolonged skin contact may cause irritation, drying or cracking of the skin.

Eye Contact: Dust may cause mechanical irritation with redness and tearing. .

Ingestion: Swallowing large amounts may cause gastrointestinal irritation and nausea.

Chronic Effects of Overexposure: Prolonged overexposure to any nuisance dust may cause lung injury. Symptoms include cough, shortness of breath, and reduced pulmonary function.

Mutagenicity: Green coke was not mutagenic in standard in vitro genetic toxicity tests in bacteria and mammalian cells. However, when tested in a modification of the standard bacterial assay developed for petroleum substance testing, DMSO extracts of petroleum coke were mutagenic in the Salmonella mutagenicity assay. In an in vivo cytogenetics study, bone marrow from male and female rats were exposed to green coke dust at 0-30 mg/m³ for 5 days, 12 months and 22 months. There were no significant differences from controls in chromosomal aberrations in any exposed animals at any of the three time points.

Reproductive Toxicity: An OECD 421 Reproductive/Developmental Toxicity Screening Test was conducted on green coke with rats via the nose for 28 days. No parental systemic or reproductive toxicity was observed in either sex. There were no treatment-related effects on the offspring. The parental systemic, reproductive, and developmental NOAELs were > 300 mg/m³.

Carcinogenicity: Rats and monkeys were exposed via inhalation five days/week for two years to 0, 10, or 30 mg/m³ petroleum green coke and no excess cancers were observed. In a lifetime skin painting study, mice were exposed three times per week to 0 or 100 µl of 250 mg/mL petroleum green coke and no excess skin or visceral cancers were observed.

Acute Toxicity Values:

Petroleum Coke: No toxicity data available.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity:

Petroleum Coke: 96 hr LL50 Pimephales promelas > 1000 mg/L, 48 hr EC50 daphnia magna 1000 mg/L, 72 hr EL50 Selenastrum capricornutum >1000 mg/L

Persistence and degradability: Petroleum coke does not contain hydrolysable chemical bonds, nor are they susceptible to biodegradation by microorganisms.

Bioaccumulative potential: Bioaccumulation is expected to be low. .

Mobility in soil: Depending on the particle size and density of the material, releases will become incorporated into the soil or transported by wind or surface water flow.

Other adverse effects: Like any solid, petroleum coke could interfere with aquatic life by physical effects such as clogging gills or burying of sediment dwellings organisms if released in very large quantities and if the density was sufficient for the coke to sink.

SECTION 13: DISPOSAL INFORMATION

Waste Disposal Method: Dispose in accordance with all local, state and federal regulations.

SECTION 14: TRANSPORTATION INFORMATION

	UN Number	Proper shipping name	Hazard Class	Packing Group	Environmental Hazard
DOT		Not Regulated			
TDG		Not Regulated			
IMDG		Not Regulated			
IATA		Not Regulated			

Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code): Petroleum coke (calcined or uncalcined) is regulated in bulk quantities by IMO under BC code N° 040, IMO Class MHB. This product must not be loaded in cargo vessels when temperatures exceed 55°C (131°F).

Special precautions: None known.

SECTION 15: REGULATORY INFORMATION

Safety, health, and environmental regulations specific for the product in question.

CERCLA Hazardous Substances (Section 103)/RQ: This product is not subject to CERCLA reporting requirements as it is sold. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

EPA SARA 311 Hazard Classification: Not Hazardous

SARA 313: This product contains the following chemicals subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372): None

CALIFORNIA PROPOSITION 65: This product may contain chemicals known to the State of California to cause cancer or reproductive toxicity.

WHMIS CLASSIFICATION: Not a controlled product.

This product has been classified in accordance with the hazard criteria in the CPR and the MSDS contains all the information required by the CPR.

Australia AICS: All of the components are listed on the Australian Inventory of Chemical Substances.

Canada DSL: All of the components are listed on the Canadian Domestic Substances List.

China: All the components are listed on Inventory of Existing Chemical Substances in China.

European EINECS: All of the ingredients are listed on the EINECS inventory.

Japan: All the components are listed in the Japanese Existing and New Chemical Substances Inventory.

Korea: All the components are listed on the Korean Existing Chemical List.

New Zealand: All the components are listed on the New Zealand Inventory of Chemicals.

Philippines: All the components are listed on the Philippine Inventory of Chemical and Chemical Substances inventory.

US EPA Toxic Substances Control Act: All of the components of this product are listed on the TSCA inventory.

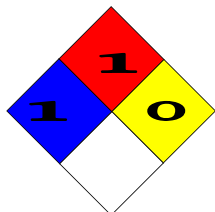
SECTION 16: OTHER INFORMATION

SDS Revision History: Converted to GHS format – all Sections revised

Date of current revision: September 24, 2014

Date of previous revision: June 19, 2008

**National
Fire
Protection
Association
(U.S.A)**



**Health: 1
Flammability : 1
Instability: 0
Specific Hazard:**

Disclaimer: This product material safety data sheet provides health and safety information. The product should be used in applications consistent with this product literature. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to ensure safe workplace operations.

This material safety data sheet is provided in good faith and meets the requirements of the hazardous communication provisions of SARA TITLE III and 29 CFR 1910.1200(g) of the OSHA regulations. The above information is based on review of available information Sinclair believes is reliable and is supplied for informational purposes only. Sinclair does not guarantee its completeness or accuracy. Since conditions of use are outside the control of Sinclair, Sinclair disclaims all warranties, express or implied, and any liability for damage or injury which results from the use of the above data. Nothing herein is intended to permit infringement of valid patents and licenses.