



MATERIAL SAFETY DATA SHEET

Petroleum Coke

MSDS No. 4027

**EMERGENCY OVERVIEW**

**CAUTION**

Excessive exposure to dust may cause eye, mouth, nose, and/or throat irritation. Excessive skin contact may cause irritation.



NFPA 704 (Section 16)

**1. CHEMICAL PRODUCT and COMPANY INFORMATION**

HOVENSA L.L.C.  
1 Estate Hope  
Christiansted, VI 00820-5652

**EMERGENCY TELEPHONE NUMBER (24 hrs):**  
**COMPANY CONTACT (business hours):**

CHEMTREC (800) 424-9300  
Safety Department (340) 692-3000

SYNONYMS: Coke  
SEE SECTION 16 FOR ABBREVIATIONS AND ACRONYMS.

**2. COMPOSITION AND INFORMATION ON INGREDIENTS**

| INGREDIENT NAME (CAS No.)   | CONCENTRATION PERCENT BY WEIGHT |
|-----------------------------|---------------------------------|
| Petroleum Coke:(64741-79-3) | 100                             |

A solid, carbonaceous material resulting from the thermal decomposition of petroleum residue; remaining hydrocarbons have a very high carbon to hydrogen ratio.

**3. HAZARDS IDENTIFICATION**

**EYES**

Contact may cause slight to moderate irritation.

**SKIN**

May cause slight to moderate irritation with prolonged or repeated contact.

**INGESTION**

Low order of oral toxicity. Not an expected route of exposure under most conditions. However, good personal hygiene should be practiced to minimize ingestion (such as from hands).

**INHALATION**

Inhalation of excessive dust concentrations may be irritating to the nose, mouth, throat, and lungs.

**CHRONIC and CARCINOGENICITY**

Repeated chronic inhalation exposure may cause impaired lung function. There is no evidence that such exposures cause pneumoconiosis, carcinogenicity, or other chronic health effects.



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**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE**

Persons with preexisting respiratory disease, such as asthma, may have symptoms aggravated by dust exposure.

**4. FIRST AID MEASURES**

**EYES**

In case of contact with eyes, immediately flush with clean, low-pressure water for at least 15 min. Hold eyelids open to ensure adequate flushing. Seek medical attention.

**SKIN**

Remove contaminated clothing. Wash contaminated areas thoroughly with soap and water or waterless hand cleanser. Obtain medical attention if irritation or redness develops.

**INGESTION**

Obtain medical attention if large amounts are ingested.

**INHALATION**

Remove person to fresh air. If person is not breathing provide artificial respiration. If necessary, provide additional oxygen once breathing is restored if trained to do so. Seek medical attention immediately.

**5. FIRE FIGHTING MEASURES**

**FLAMMABLE PROPERTIES:**

|                            |     |
|----------------------------|-----|
| FLASH POINT:               | N/A |
| AUTOIGNITION TEMPERATURE:  | N/D |
| LOWER EXPLOSIVE LIMIT (%): | N/D |
| UPPER EXPLOSIVE LIMIT (%): | N/D |

**FIRE AND EXPLOSION HAZARDS**

Product will burn. In very large quantities, spontaneous heating and combustion (smoldering) may occur.

**EXTINGUISHING MEDIA**

Water, foam, carbon dioxide, or dry chemical.

**FIRE FIGHTING INSTRUCTIONS**

Small fires in the incipient (beginning) stage may typically be extinguished using handheld portable fire extinguishers and other fire fighting equipment.

Large fires are best extinguished with water. Surfactant (foam or soap) in water may be effective in reaching deep, smoldering fires (such as in coke pile).

Firefighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH/MSHA- approved pressure-demand self-contained breathing apparatus with full facepiece and full protective clothing.

See Section 16 for the NFPA 704 Hazard Rating.

**6. ACCIDENTAL RELEASE MEASURES**

ACTIVATE FACILITY'S SPILL CONTINGENCY OR EMERGENCY RESPONSE PLAN if applicable.

Carefully shovel, scoop or sweep up into a waste container for reclamation or disposal. Avoid creating dusty conditions; water fog may be necessary to minimize dust generation. Respiratory protection (Section 8) is recommended if a visible dust is generated.



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**7. HANDLING and STORAGE**

**HANDLING and STORAGE PRECAUTIONS**

No special storage requirements are necessary. Avoid creating dusty conditions. Minimize physical contact with the product.

**8. EXPOSURE CONTROLS and PERSONAL PROTECTION**

**EXPOSURE LIMITS**

| Component (CAS No.)         | Source | TWA (ppm)   | Note |
|-----------------------------|--------|---|------|
| Petroleum Coke (64741-79-3) | OSHA   | 15 mg/m3 (total dust);<br>5 mg/m3 (respirable dust) |      |
|                             | ACGIH  | 10 mg/m3 (total dust);<br>3 mg/m3 (respirable dust) |      |

**ENGINEERING CONTROLS**

Use adequate ventilation to keep dust concentrations of this product below occupational exposure limits.

**EYE/FACE PROTECTION**

Chemical splash or dust goggles are recommended where dust may be generated.

**SKIN PROTECTION**

Avoid repeated or prolonged skin contact. Gloves and skin protection are recommended for repeated/prolonged contact. Disposable clothing such as Tyvek® (DuPont) may be warranted to minimize skin and clothing contamination, depending on the work to be performed.

**RESPIRATORY PROTECTION**

A NIOSH/ MSHA-approved air-purifying respirator with particulate classification N-95 or greater filter cartridges or canister may be permissible under certain circumstances where airborne concentrations are or may be expected to exceed exposure limits or for odor or irritation. Protection provided by air-purifying respirators is limited. Refer to OSHA 29 CFR 1910.134, ANSI Z88.2-1992, NIOSH Respirator Decision Logic, and the manufacturer for additional guidance on respiratory protection selection.

Use a positive pressure, air-supplied respirator if there is a potential for uncontrolled release, exposure levels are not known, in oxygen-deficient atmospheres, or any other circumstance where an air-purifying respirator may not provide adequate protection.

**WORK/HYGIENIC PRACTICES**

Use good personal hygiene practices. Avoid repeated and/or prolonged skin exposure. Wash hands with soap and water before eating, drinking, smoking, or using toilet facilities. Do not allow eating, drinking, or smoking in the work area. As with any dust, remove contaminated clothing and launder before reuse.

**9. PHYSICAL and CHEMICAL PROPERTIES**

**APPEARANCE**

Black solid

**ODOR**

Practically odorless

**BASIC PHYSICAL PROPERTIES**



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BOILING POINT: N/A  
VAPOR PRESSURE: N/A (essentially non-volatile)  
SPECIFIC GRAVITY (H<sub>2</sub>O = 1): > 1.0  
PERCENT VOLATILES: Negligible  
SOLUBILITY (in H<sub>2</sub>O): Negligible

**10. STABILITY and REACTIVITY**

**STABILITY:** Stable. Hazardous polymerization will not occur.

**CONDITIONS TO AVOID and INCOMPATIBLE MATERIALS**

Ignition sources; open flame. Avoid strong oxidizing materials.

**HAZARDOUS DECOMPOSITION PRODUCTS:**

Smoke, carbon monoxide, and/or oxides of sulfur when burned

**11. TOXICOLOGICAL PROPERTIES**

**ACUTE TOXICITY:**

Acute Dermal (rabbits) LD50: > 2 g/kg  
Acute Oral (rats) LD50: > 2 g/kg  
Primary Dermal Irritation: slightly irritating (rabbits)  
Draize Eye Irritation: practically non-irritating (rabbits)

**CHRONIC EFFECTS AND CARCINOGENICITY**

Carcinogenicity: **OSHA:** NO **IARC:** NO **NTP:** NO **ACGIH:** NO

Repeated inhalation of the petroleum coke dust (10.2 and 30.7 mg/m<sup>3</sup>) over a two-year period resulted in lung damage typical of high dust exposure including inflammation and scarring in rats. Similar exposures in monkeys did not produce similar lung effects. There was no observation of a carcinogenic effect at any dose following a lifetime exposure. There is no evidence of pneumoconiosis or carcinogenicity in human health studies.

**12. ECOLOGICAL INFORMATION**

Keep out of sewers, drainage and waterways. Report spills and releases, as applicable, under Federal and State regulations.

**13. DISPOSAL CONSIDERATIONS**

Consult federal, state and local waste regulations to determine appropriate disposal options.

**14. TRANSPORTATION INFORMATION**

PROPER SHIPPING NAME: NONE  
HAZARD CLASS and PACKING GROUP: N/A  
DOT IDENTIFICATION NUMBER: N/A  
DOT SHIPPING LABEL: N/A

**15. REGULATORY INFORMATION**

**U.S. FEDERAL, STATE and LOCAL REGULATORY INFORMATION**

Any spill or uncontrolled release of this product, including any substantial threat of release, may be subject to federal, state and/or local reporting requirements. This product and/or its constituents may also be subject to other regulations at the state and/or local level. Consult those regulations applicable to your facility/operation.

**CERCLA SECTION 103 and SARA SECTION 304 (RELEASE TO THE ENVIRONMENT)**



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The CERCLA definition of hazardous substances contains a "petroleum exclusion" clause which exempts crude oil, refined, and unrefined petroleum products and any indigenous components of such. However, other federal reporting requirements (e.g., SARA Section 304 as well as the Clean Water Act if the spill occurs on navigable waters) may still apply.

**SARA SECTION 311/312 - HAZARD CLASSES**

| <u>ACUTE HEALTH</u> | <u>CHRONIC HEALTH</u> | <u>FIRE</u> | <u>SUDDEN RELEASE OF PRESSURE</u> | <u>REACTIVE</u> |
|---------------------|-----------------------|-------------|-----------------------------------|-----------------|
| --                  | --                    | --          | --                                | --              |

**SARA SECTION 313 - SUPPLIER NOTIFICATION**

This product does not contain toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and of 40 CFR 372.

**CALIFORNIA PROPOSITON 65 LIST OF CHEMICALS**

This product does not contain any chemicals that are included on the Proposition 65 "List of Chemicals" required by the California Safe Drinking Water and Toxic Enforcement Act of 1986.

**16. OTHER INFORMATION**

**NFPA® HAZARD RATING**

|             |   |            |
|-------------|---|------------|
| HEALTH:     | 0 | Negligible |
| FIRE:       | 1 | Slight     |
| REACTIVITY: | 0 | Negligible |

**HMIS® HAZARD RATING**

|           |   |            |
|-----------|---|------------|
| HEALTH:   | 0 | Negligible |
| FIRE:     | 1 | Slight     |
| PHYSICAL: | 0 | Negligible |

**SUPERSEDES MSDS DATED:**                      03/22/99

**ABBREVIATIONS:**

AP = Approximately      < = Less than                      > = Greater than  
 N/A = Not Applicable      N/D = Not Determined      ppm = parts per million

**ACRONYMS:**

|        |   |       |  |
|--------|---|-------|--|
| ACGIH  | American Conference of Governmental Industrial Hygienists         | NFPA  | National Fire Protection Association (617) 770-3000            |
| AIHA   | American Industrial Hygiene Association                           | NIOSH | National Institute of Occupational Safety and Health           |
| ANSI   | American National Standards Institute (212) 642-4900              | NOIC  | Notice of Intended Change (proposed change to ACGIH TLV)       |
| API    | American Petroleum Institute (202) 682-8000                       | NTP   | National Toxicology Program                                    |
| CERCLA | Comprehensive Emergency Response, Compensation, and Liability Act | OPA   | Oil Pollution Act of 1990                                      |
| DOT    | U.S. Department of Transportation [General info: (800) 467-4922]  | OSHA  | U.S. Occupational Safety & Health Administration               |
| EPA    | U.S. Environmental Protection Agency                              | PEL   | Permissible Exposure Limit (OSHA)                              |
| HMIS   | Hazardous Materials Information System                            | RCRA  | Resource Conservation and Recovery Act                         |
| IARC   | International Agency for Research on Cancer                       | REL   | Recommended Exposure Limit (NIOSH)                             |
| MSHA   | Mine Safety and Health Administration                             | SARA  | Superfund Amendments and Reauthorization Act of 1986 Title III |
|        |   | SCBA  | Self-Contained Breathing Apparatus                             |



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|      |  |       |   |
|------|--|-------|---|
| SPCC | Spill Prevention, Control, and Countermeasures   | TWA   | Time Weighted Average (8 hr.)                             |
| STEL | Short-Term Exposure Limit (generally 15 minutes) | WEEL  | Workplace Environmental Exposure Level (AIHA)             |
| TLV  | Threshold Limit Value (ACGIH)                    | WHMIS | Canadian Workplace Hazardous Materials Information System |
| TSCA | Toxic Substances Control Act                     |       |   |

**DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES**

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