

Material Safety Data Sheet

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

MSDS#005

Rev. Mar. 2009

LABORATORY GAS OIL SAMPLE

Product Use: Laboratory Testing Sample

Synonyms: Cat Cracker Feed Stock, Vacuum Gas Oil, Straight Run Fuel Oil

Company Identification: Clark Laboratories, 1801 Route 51 South, Jefferson Hills, PA 15025

Transportation Emergency Response: CHEMTREC: (800) 424-9300 or (703) 527-3887

Health Emergency: Emergency Information Centers are located in the USA.

SECTION 2 COMPOSITION/ INFORMATION ON INGREDIENTS

COMPONENTS	CAS NUMBER	AMOUNT
Gas Oil, Straight Run	64741-43-1	99-100 %weight
Sulfur Compounds	N/A	0-1%weight

CAUTION! The percentage of sulfur compounds varies with crude oil composition. Under certain circumstances sulfur compounds in hot product may form hydrogen sulfide (H₂S). Cooling product may continue to emit traces of entrapped H₂S or other dissolved gases.

A complex combination of hydrocarbons produced by the distillation of crude oil. It consists of hydrocarbons having carbon numbers predominately in the range of C11 to C25.

SECTION 3 HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

- OSHA/NFPA COMBUSTABLE LIQUID
- - EFFECTS CENTRAL NERVOUS SYSTEM
- SLIGHT TO MODERATE IRRITANT

Moderate fire hazard. Avoid breathing vapors or mists. May cause dizziness and drowsiness. May cause moderate eye irritation and skin irritation. Long-term, repeated exposure may cause skin cancer. If ingested, do NOT induce vomiting, as this may cause chemical pneumonia (fluid in the lungs).

IMMEDIATE HEALTH EFFECTS

Eye: Contact with eyes may cause mild to moderate irritation.

Skin: May cause skin irritation with prolonged or repeated contact. Practically non-toxic if absorbed following acute (single) exposure. May cause dermal sensitization.

Ingestion: This material has a low order of acute toxicity. If large quantities are ingested, nausea, vomiting and diarrhea may result. Ingestion may also cause effects similar to inhalation of the product. Aspiration may result in chemical pneumonia (fluid in the lungs), severe lung damage, respiratory failure and even death. Ingestion may also lead to central nervous system (brain) effects which may include headache, dizziness, loss of balance and coordination, unconsciousness, coma, respiratory failure and death.

Inhalation: Because of its low vapor pressure, this product presents a minimal inhalation hazard at ambient temperature. Upon heating, fumes may be evolved. Inhalation of fumes or mist may result in respiratory tract irritation and central nervous system (brain) effects may include headache, dizziness, loss of balance and coordination, unconsciousness, coma, respiratory failure, and death.

DELAYED OR OTHER HEALTH EFFECTS:

Similar products produced skin cancer and systemic toxicity in laboratory animals following repeated applications. The significance of these results to human exposures has not been determined - see Section 11, Toxicological Information.

SECTION 4 FIRST AID MEASURES

Eye: 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: DO NOT INDUCE VOMITING. Do not give liquids. Obtain immediate medical attention. If spontaneous vomiting occurs, lean victim forward to reduce the risk of aspiration. Monitor for breathing difficulties.

Small amounts of material which enter the mouth should be rinsed out until the taste is dissipated.

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.

SECTION 5 FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES:

FLASH POINT: >141 deg. F

AUTOIGNITION TEMPERATURE: 640 deg. F

OSHA/NFPA FLAMMABILITY CLASS: IIIA (combustible)

LOWER EXPLOSIVE LIMIT (%): N/D

UPPER EXPLOSIVE LIMIT (%): N/D

FIRE AND EXPLOSION HAZARDS: Vapors may be ignited rapidly when exposed to heat, spark, open flame or other source of ignition. When mixed with air and exposed to an ignition source, flammable vapors can burn in the open or explode in confined spaces. Being heavier than air, vapors may travel long distances to an ignition source and flash back. Runoff to sewer may cause fire or explosion hazard.

EXTINGUISHING MEDIA: Use water fog, foam, dry chemical or carbon dioxide (CO₂) to extinguish flames.

PROTECTION OF FIRE FIGHTERS:

Fire Fighting Instructions: For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.

Combustion Products: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion.

SECTION 6 ACCIDENTAL RELEASE MEASURES

ACTIVATE FACILITY'S SPILL CONTINGENCY OR EMERGENCY RESPONSE PLAN.

Evacuate nonessential personnel and remove or secure all ignition sources. Consider wind direction; stay upwind and uphill, if possible. Evaluate the direction of product travel, diking, sewers, etc. to confirm spill areas. Carefully contain and stop the source of the spill, if safe to do so. Protect bodies of water by diking, absorbents, or absorbent boom, if possible. Do not flush down sewer or drainage systems, unless system is designed and permitted to handle such material. The use of fire fighting foam may be useful in certain situations to reduce vapors. Take up with sand or other oil absorbing materials. Carefully shovel, scoop or sweep up into a waste container for reclamation or disposal. Response and clean-up crews must be properly trained and must utilize proper protective equipment.

SECTION 7 HANDLING AND STORAGE

Precautionary Measures: Handle as a combustible liquid. Keep away from heat, sparks, and open flame! Electrical equipment should be approved for classified area. Bond and ground containers during product transfer to reduce the possibility of static-initiated fire or explosion.

General Handling Information: Keep away from flame, sparks, excessive temperatures and open flame. Use approved vented containers. Keep containers closed and clearly labeled. Empty product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose such containers to sources of ignition. Store in a well-ventilated area. This storage area should comply with NFPA 30 "Flammable and Combustible Liquid Code". Avoid storage near incompatible materials.

Work/Hygienic Practices: Emergency eye wash capability should be available in the near proximity to operations presenting a potential splash exposure. Use good personal hygiene practices. Avoid repeated and/or prolonged skin exposure. Wash hands before eating, drinking, smoking, or using toilet facilities. Do not use as a cleaning solvent on the skin. Do not use gasoline or solvents (naphtha, kerosene, etc.) for washing this product from exposed skin areas. Waterless hand cleaners are effective. Promptly remove contaminated clothing and launder before reuse. Use care when laundering to prevent the formation of flammable vapors which could ignite via washer or dryer. Consider the need to discard contaminated leather shoes and gloves.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Use adequate ventilation to keep vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces.

PERSONAL PROTECTIVE EQUIPMENT

Eye/Face Protection: Safety glasses or goggles are recommended where there is a possibility of splashing or spraying

Skin Protection: Gloves constructed of nitrile, neoprene, or PVC are recommended. Chemical protective clothing such as of E.I. DuPont Tyvek QC®, Saranex®, TyChem® or equivalent recommended based on degree of exposure. Note:

The resistance of specific material may vary from product to product as well as with degree of exposure. Consult manufacturer specifications for further information

Respiratory Protection: A NIOSH/ MSHA-approved air-purifying respirator with organic vapor 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.

Occupational Exposure Limits:

Component	Limit	TWA	STEL	Notation
Petroleum Oil	ACGIH_TLV	5mg/m3(mist)		
Petroleum Oil	OSHA_PEL	5mg/m3(mist)		

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Attention: the data below are typical values and do not constitute a specification.

Color: Variable depending on its source, dark brown or greenish black

Physical State: Liquid

Odor: Petroleum odor

pH: N/A

Vapor Pressure: N/A

Vapor Density (Air = 1): N/A

Boiling Point: 400-750 deg. F

Solubility: Low PPM range in water.

Specific Gravity: 0.8-0.9 @ 15.6°C (60.1°F)

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Incompatibility With Other Materials: May react with strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

Hazardous Decomposition Products: None known (None expected)

Hazardous Polymerization: Hazardous polymerization will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Acute dermal LD50 (rabbits): > 5 ml/kg Acute oral LD50 (rats): 5.13 ml/kg

Primary dermal irritation: Slightly irritating (rabbits) Draize eye irritation: mildly irritating (rabbits)

Guinea pig sensitization: Mildly sensitizing

CHRONIC EFFECTS AND CARCINOGENICITY

Carcinogenicity: **OSHA:** NO **IARC:** 2B (animal) **NTP:** YES **ACGIH:** 1997 NOIC: A1

This material contains polynuclear aromatic hydrocarbons (PNAs), some of which are animal carcinogens. Studies have shown that similar products produce skin tumors in laboratory animals following repeated applications without washing or removal. The significance of this finding to human exposure has not been determined. Other studies with active skin carcinogens have shown that washing the animal's skin with soap and water between applications reduced tumor formation.

The presence of carcinogenic PNAs indicates that precautions should be taken to minimize repeated and prolonged inhalation of fumes or mists.

MUTAGENICITY (genetic effects)

Materials of similar composition have been positive in mutagenicity studies.

SECTION 12 ECOLOGICAL INFORMATION

Keep out of sewers, drainage areas, and waterways. Report spills and releases, as applicable, under state and federal regulations.

SECTION 13 DISPOSAL CONSIDERATIONS

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

SECTION 14 TRANSPORT INFORMATION

DOT Shipping Name: Not Restricted by DOT/IATA

DOT Hazard Class and packing group: N/A

DOT Identification Number: N/A

DOT Shipping Label: N/A

SECTION 15 REGULATORY INFORMATION

U.S. FEDERAL, STATE and LOCAL REGULATORY INFORMATION

This product and its constituents listed herein are on the EPA TSCA Inventory. 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.

CLEAN WATER ACT (OIL SPILLS)

Any spill or release of this product to "navigable waters" (essentially any surface water, including certain wetlands) or adjoining shorelines sufficient to cause a visible sheen or deposit of a sludge or emulsion must be reported immediately to the National Response Center (1-800-424-8802) or, if not practical, the U.S. Coast Guard with follow-up to the National Response Center, as required by U.S. Federal Law. Also contact appropriate state and local regulatory agencies as required.

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

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>
X	X	X	--	--

SARA SECTION 313 - SUPPLIER NOTIFICATION

This product does not contain any 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:

SECTION 16 OTHER INFORMATION

NFPA® HAZARD RATING

HEALTH: 0
FIRE: 2
REACTIVITY: 0

HMIS® HAZARD RATING

HEALTH: 1*
FIRE: 2
REACTIVITY: 0

(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, *- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV - Threshold Limit Value

TWA - Time Weighted Average

STEL - Short-term Exposure Limit

PEL - Permissible Exposure Limit

CAS - Chemical Abstract Service Number

NDA - No Data Available

NA - Not Applicable

<= - Less Than or Equal To

>= - Greater Than or Equal To

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.