Crude Oil - Safety Data Sheet (SDS)

1. PRODUCT and COMPANY IDENTIFICATION

Material Identity: Crude Oil
Trade Name(s): Oriente, Cano Limon, Line 63, Shell-Ventura, SU Light, Rainbow, West Texas Inter-Crude, Peace River-Crude, Canadian, Pembina Crude-Canadian, Pembina, Forcados, Calinina, Basrah Light, Basrah, Arab Medium, Baring Crude, Girassol
Other Name(s): Earth Oil, Petroleum Oil, Rock Oil, Zafiro
Chemical Description: This material is a C1 to C50 hydrocarbon liquid which contains approximately 9 to 28 wt% sulfur compounds

Manufacturer's Address: BP West Coast Products LLC
Carson Business Unit
1801 E. Sepulveda Boulevard
Carson, California 90746-6210
Blaine, Washington 98230

Telephone Numbers:
Emergency Health Information: 1 (800) 447-8735
Emergency Spill Information: 1 (800) 424-9300 C H E M T R E C (U S A )

2. COMPONENTS and EXPOSURE LIMITS

Component: Crude Oil, Petroleum 6002-05-9
CAS No: 8002-05-9
% Composition By Volume: EQ

ACGIH TLV: N/A
OSHA PEL: N/A

3. HAZARD IDENTIFICATION

Since specific exposure standards or control limits have not been established for this material, the exposure limits shown here are suggested as minimum control guidelines.

CRUDE OIL

DANGER
HIGHLY FLAMMABLE! OSHA/NIOSH Flammable liquid. KEEP AWAY FROM HEAT, SPARKS, AND OPEN FLAME! CONTAINS PETROLEUM DISTILLATES! Avoid breathing vapors or mists. Use only with adequate ventilation. If swallowed, do not induce vomiting since aspiration into the lungs may cause chemical pneumonitis. May cause irritation or more serious skin disorders! May be harmful if inhaled! May cause irritation of the nose, throat, and lungs, headache, dizziness, drowsiness, loss of coordination, fatigue, nausea and labored breathing. May cause irregular heartbeats. Avoid prolonged or repeated liquid, mist, and vapor contact with eyes, skin, and respiratory tract.

Wash hands thoroughly after handling.

Sulfur compounds in this material may decompose to release hydrogen sulfide gas which may accumulate to potentially lethal concentrations in enclosed air spaces. Vapor concentrations of hydrogen sulfide above 50 ppm, or prolonged exposure at lower concentrations, may cause irritation or more serious skin disorders. Do not depend on the sense of smell to detect hydrogen sulfide.

Long-term tests show that similar crude oils have produced skin tumors in laboratory animals.

Crude oils contain some polycyclic aromatic hydrocarbons which have been shown to be carcinogenic after prolonged or repeated skin contact in laboratory animals.

Routes of Exposure

Inhalation (Primary): Vapors or mists from this material, at concentrations greater than the recommended exposure limits in Section 2, can cause irritation of the nose, throat, and lungs, headache, dizziness, drowsiness, loss of coordination, fatigue, nausea and labored breathing. Airborne concentrations above the recommended exposure limits are not anticipated during normal workplace activities due to the slow evaporation of this material at ambient temperatures. Exposure to moderate airborne concentrations of hydrogen sulfide (less than 50 ppm) can result in irritation of the eyes, nose and throat, headache, dizziness, shortness of breath, nausea, and nervousness. Exposure to hydrogen sulfide vapor above 200 ppm may cause irritation of mucous membranes, inflammation of the lungs, accumulation of fluid in the lungs, irregular heartbeats, unconsciousness with convulsions or impaired breathing with suffocation. Exposure to higher concentrations of hydrogen sulfide vapor (above 500 ppm) may cause rapid death.

Eye Contact: May cause slight eye irritation.

Skin Contact: Moderate skin irritation may occur upon short-term exposure. Exposure to sunlight may increase the degree of skin irritation. Absorption through the skin may occur and produce toxic effects (see Summary of Chronic Hazards).

Ingestion: May cause irritation of the mouth, throat, and gastrointestinal track leading to nausea, vomiting, diarrhea, and rashes. May cause headache, dizziness, drowsiness, loss of coordination, fatigue, nausea and labored breathing.

ASPIRATION HAZARD: Aspiration into the lungs may cause chemical pneumonitis. This material can enter the lungs during swallowing or vomiting and may cause lung inflammation and damage which in severe cases may be fatal.
**CRUDE OIL**

**Summary of Chronic Hazards and Special Health Effects**

Personnel with pre-existing central nervous system (CNS) disease, skin disorders, or chronic respiratory diseases should be evaluated by an appropriate health professional before exposure to this material.

Prolonged/repeated skin exposure, inhalation or ingestion of this material may result in adverse chemical or systemic effects. Avoid prolonged or repeated exposure.

May be harmful if absorbed through the skin. Prolonged or repeated contact may create cancer risk, organ damage, and adversely affect reproduction, fetal development and fetal survival. Avoid all skin contact. Neurotoxic effects have been associated with n-hexane, a component of this material. Avoid prolonged or repeated exposure.

See Section 11 for additional toxicological information.

**Emergency and First Aid**

**Inhalation**

Immediately remove personnel to area of fresh air. For respiratory distress, give oxygen, rescue breathing, or administer CPR (cardiopulmonary resuscitation) if necessary. Obtain prompt medical attention.

**Eye Contact**

Flush eyes with clean, low-pressure water for at least 15 minutes, occasionally lifting the eyelids. If pain or redness persists after flushing, obtain medical attention.

**Skin Contact**

Immediately remove contaminated clothing. Wash affected skin thoroughly with soap and water. If irritation persists, obtain medical attention.

**Ingestion**

Do not induce vomiting since aspiration into the lungs may cause lipid pneumonia. Obtain prompt medical attention.

**Emergency Medical Treatment Procedures**

See above procedures. Personnel with pre-existing central nervous system disease, skin disorders, chronic respiratory diseases, or impaired liver of kidney function should avoid exposure to this product.

**FIRE and EXPLOSION**

**Flash Point (Method)**

Based on NFPA Petroleum, Crude AP, 20°F to 90°F

**NFPA Hazard Rating:**

Health: 1 = High

Reactivity: 0 = Insignificant

**Fire and Explosion Hazards**

HIGHLY FLAMMABLE! The material releases flammable vapors at or below ambient temperatures. When mixed with air in certain proportions and exposed to an ignition source, these vapors can burn in the open or explode in confined spaces.

Flammable vapors may travel long distances along the ground before reaching a point of ignition and flashing back.

Open top tanks involved in a fire have a potential for "boil-over" if water or water-in-oil emulsion is at the bottom of the tank. Boil-over may result in a large explosion of burning oil from the tank, greatly increasing the fire area.

**Extinguishing Media**

Foam, Dry chemical, Carbon dioxide (CO2)

Water and water fog can cool the fire but may not extinguish the fire.

**Special Firefighting Procedures**

For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment. This may include self-contained breathing apparatus to protect against the hazardous effects of combustion products and oxygen deficiencies. Cool tanks and containers exposed to fire with water. If firefighters cannot work upwind to the fire, respiratory protective equipment must be worn unless and until atmospheric monitoring indicates that such protection is not required. Improper use of water and extinguishing media containing water may cause frothing which can spread the fire over a larger area.

Water fog or pre-effective flow of water for cooling tank shells and surfaces exposed to fire, but may not achieve extinguishment.

**Engineering Controls**

Where possible, use adequate ventilation to keep vapor and mist concentrations of this material below the occupational exposure limits shown in Section 2. Electrical equipment should comply with National Electrical Code (NEC) standards (see Section 7).

**Respiratory**

Where there is potential for exposure to hydrogen sulfide gas in excess of the permissible exposure limit, a NIOSH/MSHA-approved supplied-air respirator operated in positive pressure mode should be worn.

If hydrogen sulfide gas is not present in excess of permissible exposure limits, a NIOSH/MSHA-approved air-purifying respirator with an organic vapor cartridge may be used. Where there is no air contamination, workers who feel comfortable working in atmospheres containing hydrogen sulfide vapor may exceed the exposure limits in Section 2. Where work conditions may generate airborne levels of the material, also use a high-efficiency particulate prefilter. Consult a health and safety professional for guidance in respirator selection. Respirator use should comply with OSHA 29 CFR 1910.134.

**CAUTION:** The protection provided by air-purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrollable release, if exposure levels are not known, or if concentrations exceed the protection limits of the air-purifying respirator.

**Eyes**

Eye protection should be worn. If there is potential for splashing or spraying, chemical protective goggles and/or a face shield should be worn. If contact lenses are worn, consult an eye specialist or a safety professional for additional precautions. Suitable eye wash water should be available in case of eye contact with this material.

**Skin**

Avoid all skin contact with this material. If conditions of use present any potential for skin contact, clean and impermeable clothing such as gloves, apron, boots, and facial protection should be worn. Non-Teflon, Nitrile, Butyl rubber or silicon glove material is recommended. When working around equipment or processes which may create the potential for skin contact, full body coverage should be worn, which consists of impervious boots and oil-resistant coated Teflon suit or other impermeable jacket and pants.

Non-impervious clothing which accidentally becomes contaminated with this material should be removed promptly and not reworn until the clothing is washed thoroughly and the contamination is effectively removed. Discard soiled leather gloves.
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9. PHYSICAL and CHEMICAL PROPERTIES

Boiling Point: AP, -54°F to 110°F
Viscosity Units, Temp. (Method): N/D
Dry Point: N/A
Freezing Point: N/D
Vapor Pressure, Temp. (Method): AP, 1 to 2 at 100°F (REID-PSIA)
Specific Gravity (H₂O = 1 @ 39.2°F): AP, 0.88
Vapor Sp. Gr. (Air = 1.0 @ 60°F - 90°F): N/D
Solubility in Water: Negligible
pH: N/A
Appearance and Odor: Thick light yellow to dark black colored liquid. Petroleum hydrocarbon odor.
Other Physical and Chemical Properties: Total sulfur - approx. 1.1% - 2.3% Hydrogen sulfide content is less than 5 ppm dissolved in liquid. Vanadium - approx. 210 ppm

10. STABILITY and REACTIVITY

Stability: Hazardous Polymerization: Stable
Hazardous Reactivity: N/A
Other Chemical Reactivity: N/A
Conditions to Avoid: Heat, sparks, and open flame.
Materials to Avoid: Strong acids, alkalis, and oxidizers such as liquid chlorine and oxygen.
Hazardous or Decomposition Products: Burning or excessive heating may produce carbon monoxide and other harmful gases or vapors including oxides of sulfur and nitrogen.

11. TOXICLOGICAL INFORMATION

Toxicological Information: The information found in this section is written for medical, toxicology, occupational health and safety professionals. This section provides technical information on the toxicity testing of this or similar materials or its components. If clarification of the technical content is needed, consult a professional in the areas of expertise listed above.

Prolonged/Repetitive Exposures: IARC has determined there is limited evidence for the carcinogenicity in experimental animals of crude oil and "inadequate evidence for the carcinogenicity in humans of crude oil." IARC concludes that "crude oil is not classifiable as to its carcinogenicity to humans (Group 3)."

Crude oil administered orally to pregnant rats during gestation produced increased number of resorptions and decrease in fetal weight and length.

Exposure to N-hexane at concentrations considerably higher than the current permissible exposure limit has reportedly been associated with peripheral neuropathy.

12. ECOLOGICAL INFORMATION

Not Available

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods: Maximize recovery for reuse or recycling. Consult environmental professional to determine if state or federal regulations would classify spilled or contaminated materials as a hazardous waste. Use only approved transporters, recyclers, treatment, storage or disposal facilities. Comply with all federal, state and local laws pertaining to waste management.

14. TRANSPORT INFORMATION

UN Proper Shipping Name: Petroleum crude oil
UN Hazard Class: 3
UN Number: UN1257
UN Packing Group: PG I

15. REGULATORY INFORMATION

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA), TITLE III
Section 311/312 Hazard Categories:
Immediate (acute) health hazard
Delayed (chronic) health hazard
Fire hazard
No chemicals in this product exceed the threshold reporting level established by SARA Title III, Section 313 and 40 CFR 372.

TOXIC SUBSTANCES CONTROL ACT (TSCA)
All components of this product are listed on the TSCA Inventory.

COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT (CERCLA)
This material is covered by CERCLA's PETROLEUM EXEMPTION. (Refer to 40 CFR 307.14)

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT OF 1986 - PROPOSITION 65

PROP 65 WARNING LABEL:
Chemicals known to the State to cause cancer, birth defects, or other reproductive harm are found in gasoline, crude oil, and many other petroleum products and their vapors, or result from their use. Read and follow label directions and use care when handling or using all petroleum products.

WARNING: This product contains the following chemical(s) listed by the state of California as known to cause cancer or birth defects or other reproductive harm.

MINERAL OILS, UNTREATED

Other Prop 65 chemicals will result under certain conditions from the use of this material. For example, burning fuels produces combustion products including carbon monoxide, a Prop 65 reproductive toxin.

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