MATERIAL SAFETY DATA SHEET

EMERGENCY TELEPHONE NUMBERS

CHEMTREC: 800-424-9300 (24 HOURS)
PARAMOUNT: 562-531-2060

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT: Domestic Flux, Flux, Kraft Saturant

PRODUCT CODES: 12206, 12207, 12208, 12220, 12240, 12241, 12244, 12245

GRADES: ANS Heavy, ANS 207, ANS Light, Oriente Flux, Kraft Saturants 240, 241, 244, 245

MANUFACTURER: PARAMOUNT PETROLEUM CORPORATION
14700 Downey Ave.
Paramount, California 90723

MSDS DATE: October 24, 2007

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENTS	% Weight	EXPOSURE GUIDELINE		
		Limits	Agency	Type
Asphalt (CAS# 8052-42-4)	100	0.5 mg/m^3	ACGIH	TWA
		Asphalt fume as benzene-soluble aerosol		
		5 mg/m^3	CalOSHA	TWA
Hydrogen Sulfide (CAS# 7783-06-4	Varies (<1)	10 ppm	ACGIH	TWA
(May be liberated if heated)		15 ppm	ACGIH	STEL
		20 ppm	OSHA	CEIL
		50 ppm	OSHA	10 min. peak; once per 8 hour shift
		10 ppm	Cal OSHA	TWA
		15 ppm	Cal OSHA	STEL
		50 ppm	Cal OSHA	CEIL

Note: State, local or other agencies or advisory groups may have established more stringent limits. Consult an industrial hygienist or similar professional, or you local agencies, for further information.

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Health Hazards: Heated material may liberate hydrogen sulfide gas.

Physical Hazards: Contact with hot asphalt will result in thermal burns. Avoid contact with hot material.

Hydrogen sulfide and other hazardous vapors can collect in the headspace of storage tanks or other enclosed vessels. Hydrogen sulfide is extremely flammable and poisonous. Avoid breathing vapors, fumes or mists. Wear respiratory protection when venting tanks.

< Physical Form: Viscous semisolid
< Appearance: Black
< Odor: Asphalt

NFPA HAZARD CLASS: Health: 0 (Least)
Flammability: 1 (Slight)
Reactivity: 0 (Least)

POTENTIAL HEALTH EFFECTS:

Eye: Contact may cause mild irritation including stinging, watering and redness. Contact with heated material may cause thermal burns. Vapors or fumes may cause watering of the eyes.

Skin: Contact may cause mild to moderate skin irritation. Prolonged or repeated contact may worsen irritation by causing drying and cracking of the skin leading to dermatitis (inflammation). Long-term skin exposure can increase sensitivity to the sun and cause discoloration. Contact with the heated material may cause thermal burns. Fumes from heated material can also cause irritation. No harmful effects from skin absorption are expected.

Inhalation (Breathing): No information available on acute toxicity - see Signs and Symptoms below.

Heated material may liberate hydrogen sulfide – see Other Comments section below.

Ingestion (Swallowing): No harmful effects expected from ingestion – see Signs and Symptoms below.

Signs and Symptoms: Ingestion may cause irritation of the digestive tract, nausea, vomiting and diarrhea. Breathing vapors or fumes from the hot material may cause headaches, dizziness and lung irritation. Long-term exposure to high concentrations of asphalt fumes may cause chronic bronchitis and pneumonitis (inflammation of the lungs).

Cancer: See Section 11 for clarification of carcinogenicity information.

Target Organs: No data available for this material.

Developmental: No data available for this material.

Other Comments: Heated material may liberate hydrogen sulfide, a poisonous gas with the smell of rotten eggs. The smell disappears rapidly because of olfactory fatigue so odor may not be a reliable indicator of exposure. Effects of overexposure include irritation of the eyes, nose, throat, and respiratory tract, blurred vision, photophobia (sensitivity to light) and pulmonary edema (fluid accumulation in the lungs). Severe exposures can result in nausea, vomiting, muscle weakness or cramps, headache, disorientation and other signs of nervous system depression, irregular heartbeats (arrhythmias), convulsions, respiratory failure, and death.

Pre-Existing Medical Conditions: Conditions aggravated by exposure may include skin and respiratory (asthma-like) disorders.

SECTION 4: FIRST AID MEASURES

Eye: If irritation or redness develops from exposure to fumes, move victim away from exposure and into fresh air. Flush eyes with clean water. If irritation or redness persists, seek medical attention. For contact with the molten material, gently open eyelids and flush affected eye(s) with cold, not icy, water. Seek immediate medical attention.

Skin: For contact with hot asphalt, leave material on skin and flush or immerse affected area(s) using cold, not icy water for up to 10 minutes. DO NOT remove asphalt from skin, as underlying tissue may easily be torn away. Contaminated clothing may be removed provided it is not adhering to the skin. Keep injury cool to minimize swelling and tissue damage. Be alert for signs of shock from trauma, and hypothermia from excessive cooling of the injury. Seek immediate medical attention.

Inhalation (Breathing): If respiratory symptoms develop from exposure to fumes, move victim away from source of exposure and into fresh air. If symptoms persist, seek medical attention. If victim is not breathing, clear airway and immediately begin artificial respiration. If breathing difficulties develop, oxygen should be administered by qualified personnel. Seek immediate medical attention.

Ingestion (Swallowing): First aid is not normally required for the solid material; however, if hot asphalt is swallowed, seek immediate medical attention.

Note(s) to Physicians: Once it has cooled, adhered asphalt is not harmful to the skin and in fact provides a sterile cover over the affected area. The asphalt will detach itself, usually after a few days as healing occurs. If it is necessary to remove the asphalt, only medically approved solvents or warm paraffin should be used to prevent further skin damage.

If heated, this material may liberate hydrogen sulfide. In high doses hydrogen sulfide may produce pulmonary edema, respiratory depression, or respiratory paralysis. The first priority in treatment should be the establishment of adequate ventilation and the administration of 100% oxygen. If unresponsive to supportive care, nitrites may be an effective antidote.

SECTION 5: FIRE FIGHTING MEASURES

Flammable Properties:

Flash Point: 440-600^{+} ºF
OSHA Flammability Class: Not applicable
LEL/UEL: No data
Autoignition Temperature: No data

Unusual Fire & Explosion Hazards: This material may burn, but will not ignite readily. Flammable and toxic hydrogen sulfide may from in closed tank headspaces. Flammability of headspace vapors containing hydrogen sulfide will differ appreciably from the values given for asphalt. Hot asphalt may ignite flammable mixtures on contact. If water is applied to heated asphalt, it can cause violent foaming and boil over.

Extinguishing Media: Dry chemical, carbon dioxide or foam is recommended. DO NOT use a water stream. Water stream may cause violent eruptions and spreading of asphalt. Further application of water may lead to boil over. Water fog may be used on flat surfaces such as roads. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces.

Fire Fighting Instructions: This material when exposed to heat or fire may release hazardous combustion/decomposition products. Use caution and wear protective clothing, including respiratory

protection. For fires beyond the incipient stage, emergency responders in the immediate hazard area should wear bunker gear. When the potential chemical hazard is unknown, in enclosed or confined spaces, or when explicitly required by DOT, a self-contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8).

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done with minimal risk. Move undamaged containers from immediate hazard area if it can be done with minimal risk. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Cool equipment exposed to fire with water, if it can be done with minimal risk. Water or foam can cause frothing. Avoiding spreading burning liquid with water used for cooling purposed.

SECTION 6: ACCIDENTAL RELEASE MEASURES

This material may burn, but will not ignite readily. Keep all sources of ignition away from spill/release. Stay upwind and away from spill/release. Notify persons down wind of spill/release, isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done with minimal risk. Wear appropriate protective equipment including respiratory protection as conditions warrant (see Section 8). Prevent spilled material from entering sewers, storm drains, other unauthorized treatment drainage systems, and natural waterways. Dike far ahead of spill for later recovery or disposal. Allowed spilled material to solidify prior to cleanup and removal. Notify fire authorities and appropriate federal, state, and local agencies. Cleanup under expert supervision is advised. If spill of any amount is made into or upon navigable waters, the contiguous zone, or adjoining shorelines, notify the National Response Center (phone number 800-424-8802).

SECTION 7: HANDLING AND STORAGE

Handling: Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276 and 29CFR 1910.146. The use of appropriate respiratory protection is advised when concentrations exceed any established exposure limits (see Section 2 and 8). Wash thoroughly after handling. Do not wear contaminated clothing or shoes. Use good personal hygiene practice.

"Empty" containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. Containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

Before working on or in tanks, which contain or have contained this material, refer to OSHA regulations, ANSI Z49.1 and other references pertaining to cleaning, repairing, welding, or other contemplated operations.

Storage: Minimize oxygen content in vapor space of tanks, especially when approaching flash point temperature. See API publication 2023. Keep container(s) tightly closed. In a tank, barge, or other closed container, the vapor space above this material may contain hydrogen sulfide (H2S) in concentrations immediately dangerous to life and health (IDLH). Use and store this material in cool, dry, well-ventilated areas away from all sources of ignition. Post area "No Smoking or Open Flame."

Hot asphalt must never be added to a tank or other container that is not completely dry. Contact with water results in violent expansion as the water turns to steam. This can lead to dangerous boil over and may cause damage or rupture of the tank or container. Keep away from any incompatible material (see Section 10).

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls: If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits (see Section 2), additional ventilation or exhaust systems may be required.

Personal Protective Equipment (PPE):

Respiratory: Protection from fumes emitted from hot asphalt may be necessary. This product may liberate hydrogen sulfide, which has poor warning properties. Wear a positive pressure air supplied respirator where there may be potential for airborne exposure above exposure limits (see Section 2).

A NIOSH certified air-purifying respirator with an organic vapor cartridge in combination with a Type 95 particulate filter may be used under conditions where H2S is not detected, and airborne concentrations of asphalt fumes are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited (see manufacturer's respirator selection guide). Use a positive pressure air supplied respirator if there is a potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection. A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Skin: The use of thermally resistant gloves (e.g., leather, lined neoprene coated) is recommended during hot melt processing operations. A splash jacket and boots are also recommended.

Eye/Face: Approved eye protection to safeguard against potential eye contact, irritation, or injury during hot melt processing is recommended. Depending on conditions of use, a face shield may be necessary.

Other Protective Equipment: A source of clean water should be available in the work area for flushing eyes and skin. Thoroughly clean shoes and wash contaminated clothing before reuse. It is recommended that impervious clothing be worn.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Note: Unless otherwise stated, values are determined at 20°C (68°F) and 760 mm Hg (1 atm).

Flash Point: 440-600^{+} ºF
Flammable/Explosive Limits (%): No Data
Autoignition Temperature: No Data
Appearance: Black
Physical State: Viscous semisolid
Odor: Asphalt
Vapor Pressure (mm Hg): <1
Vapor Density (air=1): >1
Specific Gravity: 1.0-1.05
API Gravity: 4-11.4
Bulk Density: 8.3-8.7 lbs/gal

SECTION 10: STABILITY AND REACTIVITY

Chemical Stability: Stable under normal conditions of storage and handling.

Conditions To Avoid: Avoid all possible sources of ignition (see Sections 5 & 7). Toxic fumes can be released on heating. Do not allow hot asphalt to contact water or liquids as violent eruptions, splatter of hot material or ignition of flammable materials may result.

Incompatible Materials: Avoid contact with fluorine, nitric acid and strong oxidizing agents.

Hazardous Decomposition Products: Combustion can yield carbon monoxide, carbon dioxide, hydrogen sulfide and oxides of sulfur.

Hazardous Polymerization: Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

Asphalt (CAS# 8052-42-4)

Carcinogenicity: Skin application of asphalt fume condensate fractions caused skin tumors in laboratory mice. Animal studies in which high concentrations of asphalt fumes were breathed for extended periods of time did not cause carcinogenic effects.

There is no evidence presented by the National Toxicology Program (NTP) or the Occupational Safety and Health Administration (OSHA) to establish Asphalt as a carcinogen (cancer causing compound). After a review of the research, the International Agency for Research on Cancer (IARC) concluded there is inadequate evidence that bitumes (asphalt) alone are carcinogenic in humans; that there is limited evidence to suggest that asphalt alone is carcinogenic to humans.

Occupational Exposure: Data released by the National Institute of Occupational Safety and Health (NIOSH) suggests paving and roofing asphalt fumes and asphalt paint fumes are a potential carcinogen to individuals who have long term exposure to high concentrations of fumes, as might be expected from workers in the paving and roofing industries. The data is based on animal and human studies and have not been validated as conclusive by other studies or research organizations.

Exposure to the Community or to responders, if any, is infrequent, and at concentrations and durations significantly below levels of exposure that might be experienced by paving and roofing workers. Asphalt odors occur at levels significantly below levels needed to produce harmful health effects.

SECTION 12: ECOLOGICAL INFORMATION

Ecological testing has not been conducted on this material. However, it is not expected to be ecotoxic.

SECTION 13: DISPOSAL CONSIDERATIONS

This material, if discarded as produced, is not a RCRA "listed" hazardous waste. However, it should be fully characterized for toxicity and possible reactivity prior to disposal (40 CFR 261). Use resulting in chemical or physical change or contamination may subject it to regulation as a hazardous waste. Along with properly characterizing all waste materials, consult state and local regulation regarding the proper disposal of this material.

Container contents should be completely used and containers should be emptied prior to discard. Container rinsate could be considered a RCRA hazardous waste and must be disposed of with care and in full compliance with federal, state and local regulations. Larger empty containers, such as drums, should be returned to the distributor or to a drum reconditioner. To assure proper disposal of smaller empty containers, consult with state and local regulations and disposal authorities.

SECTION 14: TRANSPORT INFORMATION

DOT Proper Shipping Name / Technical Name: Elevated temperature liquid, n.o.s (Petroleum Asphalt)
Hazard Class or Division: 9
ID #: UN3257
Packing Group: III
Note: Not regulated by DOT if in a container of 119 gallon capacity or less.

SECTION 15: REGULATORY INFORMATION

SARA Title III Sections 311 and 312 – MSDS Requirements (40 CFR 370):

Acute: No Chronic: No Fire: No Pressure : No Reactive: No

This material contains chemicals subject to the reporting requirements of **SARA 313** and 40 CFR 372:

This material contains the following chemicals subject to the reporting requirements of **SARA 313** and 40 CFR 372:

COMPONENT	CAS NUBMER	WEIGHT %
Hydrogen Sulfide	7783-06-4	Varies (<1)

Warning: This material contains chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm, and are subject to the requirements of **California Proposition 65** (CA Health & Safety Code Section 25249.5):

COMPONENT	EFFECT
Bitumens, extracts of steam-refined and air refined	Cancer
Various Polycyclic Aromatic Hydrocarbons	Cancer

EPA (CERCLA) Reportable Quantity: --None

SECTION 16: OTHER INFORMATION

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