MATERIAL SAFETY DATA SHEET
Specialty Asphalt, All Grades

MSDS: 952
REVISION: 04/15/2011

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: **Specialty Asphalt, All Grades**

SYNONYMS: Specialty asphalt (all grades), Flux (all grades)

PRODUCT CODE:

541210 (Flux Oil)	512312 (SP-5)	512313 (SP-18)
541110 (Blending Flux)	521010 (MC Cold Mix)	535110 (Emulsion Basestock)

This Material Safety Data Sheet applies to the listed products and synonym descriptions for Hazard Communication purposes only. Technical specifications vary greatly depending on the product and are not reflected in this document. Consult specification sheets for technical information. This product contains ingredients that are considered to be hazardous as defined by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

IMPORTANT: Read this MSDS before handling or disposing of this product. Pass this information on to employees, customers and product users.

MANUFACTURER: **U.S. Oil & Refining Co.**
ADDRESS: **3001 Marshall Avenue**
Tacoma, WA 98421

EMERGENCY: **253-383-1651**
FAX: **253-272-2495**
CHEMTREC: **800-424-9300**
NATIONAL RESPONSE: **800-424-8802**

CHEMICAL FAMILY: **Hydrocarbon**

PRODUCT USE: **Jet Fuel is a complex blend of hydrocarbons derived from various refinery streams. This product is intended for us as a fuel or for use in an engineered process. Use in other applications may result in higher exposures and require additional controls, such as local exhaust ventilation and personal protective equipment.**

PREPARED BY: **U.S. Oil & Refining Co.**

CAS #: **8008-42-4**

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

NAME	CAS NUMBER	CONCENTRATION %
Petroleum Asphalt	8052-42-4	85 – 100%
Polymer Additive	Mixture	0 – 15%
Anti-Strip Additive	Mixture	0 – 1.0%
Hydrogen Sulfide	7783-06-04	Trace

SECTION 3: HAZARDS IDENTIFICATION

Warning! Combustible! Mist or vapors can cause a flash fire. Liquid, mist or vapors can cause eye, skin and respiratory tract irritation. Ingestion of liquid and aspiration into the lungs can result in chemical pneumonia.

PHYSICAL STATE:	Semi-solid, Solid at ambient temperature
COLOR:	Black
ODOR:	Asphaltic
ROUTES OF ENTRY:	Dermal Contact, Eye Contact, Inhalation, Ingestion

POTENTIAL HEALTH EFFECTS:

EYES:	Eye contact with hot product can cause severe burns. Contact with this product at warm or ambient temperatures may cause eye irritation.
SKIN:	Skin contact with hot product can cause severe thermal burns. Prolonged or frequent contact with product at warm or ambient temperatures may cause skin irritation.
INGESTION:	Contact with hot product can cause thermal burns. Ingestion of this material is expected to have a low order of acute toxicity.
INHALATION:	Vapors can irritate the eyes, nose, throat and/or lungs. Inhalation at high concentrations may cause headaches, nausea, dizziness, unconsciousness or death. Significant concentrations of hydrogen sulfide gas can be present in the vapor space of storage tanks and transport compartments. Exposure to high concentrations of hydrogen sulfide can cause unconsciousness and death.
MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:	Skin, eye and respiratory disorders may be aggravated by exposure to this product.
OVER-EXPOSURE SIGNS/SYMPTOMS:	Inhalation of high concentrations may cause eye and respiratory irritation, headaches, dizziness, nausea, unconsciousness and possibly death. Prolonged or repeated contact with product at warm or near ambient temperature may cause skin irritation. Skin contact with hot product may cause thermal burns. Prolonged or repeated contact with this product at warm or ambient temperatures may cause skin irritation and dermatitis; however, based on human experience this product is judged to be neither corrosive nor an irritant by OSHA criteria. Eye contact may cause thermal burns or eye irritation.

See toxicological information (section 11)

SECTION 4: FIRST AID MEASURES

EYES:	For contact with molten material, flush eyes with clean low-pressure water for a minimum of 15 minutes. Seek immediate medical care.
SKIN:	For contact with hot molten material, cool skin by quenching with large amounts of cool water. Do not attempt to remove solidified material from the skin, this may cause further skin/tissue damage. For skin contact with product at ambient temperatures, remove contaminated clothing. Wipe excess product off. Wash affected area with a waterless cleanser followed by soap and water. Mineral oil may be used to soften the product to aid the removal process. Seek medical attention if pain or irritation persists.
INGESTION:	Ingestion is not likely. If it occurs, do not induce vomiting. If large amounts are swallowed, seek medical attention.
INHALATION:	If affected, move person to fresh air. Administer oxygen or administer CPR (cardiopulmonary resuscitation) for respiratory distress and seek prompt medical attention. If symptoms or irritation occur, seek prompt medical attention.
NOTES TO PHYSICIANS OR FIRST AID PROVIDERS:	Immerse skin covered with hot material in cool water to limit tissue damage and prevent spread of liquid product. Recommended practice is to not attempt to remove hot material. Allow the solidified material to remain in place until cooled and allow material to naturally fall off. If removal is necessary, mineral oil may be used to assist in minimizing skin loss when removing the solidified material.

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABILTY OF THE PRODUCT:	**NFPA Class IIIB combustible material**
Flammable limits in air (% by volume)	LOWER: Not Determined UPPER: Not Determined
FLASH POINT:	>175°C (347°F) COC
AUTOIGNITION TEMPERATURE:	Not Determined
PRODUCTS OF COMBUSTION:	Carbon dioxide, carbon monoxide, sulfur oxides, hydrogen sulfide, smoke, fumes and unburned hydrocarbons.
FIRE-FIGHTING MEDIA AND INSTRUCTIONS:	Use dry chemical, foam, carbon dioxide or water fog. Water or foam may cause frothing and must be applied carefully to avoid frothing. Use water to keep fire exposed containers cool. Minimize breathing of vapors, fumes or decomposition materials. Collect contaminated fire-fighting water separately. Do not allow liquid runoff to enter sewers or public waters.
SPECIAL FIRE FIGHTING EQUIPMENT:	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Cool tanks and containers exposed to fire with water
UNUSUAL FIRE & EXPLOSION HAZARDS:	When heated above the flash point, this material will release flammable vapors which if exposed to a source of ignition can burn or be explosive in confined spaces. Mists or sprays may be flammable at temperatures below the normal flash point. Keep away from open flame. Use of water or foam on product above 212oF can cause product to expand with explosive force.

SECTION 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS:

Immediately contact emergency personnel. Eliminate all ignition sources. Keep unnecessary personnel away. Use suitable protective equipment (section 8). Do not touch or walk through spilled material.

ENVIRONMENTAL PRECAUTIONS:

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. If facility or operation has an "oil or hazardous substance contingency plan", activate its procedures. Stay upwind and away from spill. Wear appropriate protective equipment including respiratory protection as conditions warrant. Do not enter or stay in area unless monitoring indicates that it is safe to do so. Isolate hazard area and restrict entry to emergency crew. Contain spill in smallest possible area.

Prevent spilled material from entering sewers, storm drains, other unauthorized treatment or drainage systems and natural waterways. Contact fire authorities and appropriate federal, state and local agencies. If spill of any amount is made into or upon navigable waters, the contiguous zone, or adjoining shorelines, contact the National Response Center at 800-424-8802. For highway or railway spills, contact Chemtrec at 800-424-9300.

METHODS FOR CLEANING UP:

Land Spill: Shovel and dispose of with an appropriate disposal facility in accordance with local, state and federal regulations.

Water Spill: Depending on density, asphalts tend to float or sink. Asphalt will have minimal dispersion movement in water. Eliminate sources of ignition and warn other ships in the area to stay clear. Notify the proper authorities. Confine with skimming equipment if available or set booms to recover the spill.

SECTION 7: HANDLING & STORAGE

HANDLING:

Do not breathe fumes or vapor from heated material. Stay upwind when opening hatches and vents. Wear appropriate personal protective equipment to avoid skin, face and eye contact with heated material. Significant concentrations of hydrogen sulfide can be present in vapor space of storage tanks and transport compartments, which may require additional precautions.

STORAGE:

Material is frequently stored in cone roof storage tanks. Storage temperatures above 350oF will increase the risk of formation of pyrophoric sulfides and carbonaceous deposits on the roof and rafters. Refer to API Recommended Practice 2023 for additional storage guidance.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits. Special ventilation may be required for handling conditions at elevated temperatures. Ensure that eyewash stations and safety showers are close to the workstation location.

PERSONAL PROTECTION:

SKIN: PPE selection should be based on a risk assessment. Heat-resistant gloves, impervious apron, long-sleeved shirts, leather boots, safety glasses, face shield should be worn when indicated by a risk assessment.

RESPIRATORY: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

EYE: Eye protection (chemical-type goggles and/or face shield) should be worn whenever there is a likelihood of splashing or spraying liquid. Contact lenses should not be worn. Eye wash water should be provided.

OTHER: Use good personal hygiene practices.

PERSONAL PROTECTIVE EQUIPMENT IN CASE OF A LARGE SPILL: Splash goggles. Full suit. Vapor respirator. Boots. Gloves. Self-contained breathing apparatus (SCBA) should be used to avoid inhalation of the product. Suggested protective clothing might not be adequate. Consult a specialist before handling this product.

Established Occupational Exposure Limits

SUBSTANCE	VALUE	TIME/TYPE	SOURCE
Asphalt	0.5 mg/m3	8 hour TWA	ACGIH
Hydrogen Sulfide	10 ppm	8 Hour PEL	OSHA
Hydrogen Sulfide	15 ppm	15 min STEL	OSHA

Consult local authorities for acceptable exposure limits.

SECTION 9: PHYSICAL & CHEMICAL PROPERTIES

PHYSICAL STATE:	Liquid
COLOR:	Black
ODOR:	Asphaltic
BOILING POINT:	>300° (572°F)
FLASH POINT:	>175° (347°F)
FREEZING POINT:	Not Established
SPECIFIC GRAVITY:	0.98 TO 1.3 (Water=1) (@60°F)
VISCOSITY:	>0.7 PaS @60°C
VAPOR PRESSURE:	Not Determined
VAPOR DENSITY:	>1 (Air=1)
EVAPORATION RATE:	Negligible
EVAPORATION RATE:	Not Determined

SECTION 10: STABILITY & REACTIVITY

MATERIALS TO AVOID:	Open flame and extreme heat
STABILITY & REACTIVITY:	The product is stable
INCOMPATABILITY WITH VARIOUS SUBSTANCES:	Reactive with strong oxidizers
HAZARDOUS DECOMPOSITION PRODUCTS:	At ambient temperature this product does not decompose. Burning or excessive heating may produce carbon monoxide, sulfur oxides, hydrogen sulfide and other harmful vapors and gases.
HAZARDOUS POLYMERIZATION:	Will not occur
CONDITIONS TO AVOID (STABILITY):	Heat, sparks and/or open flame Strong oxidizers

SECTION 11: TOXICOLOGICAL INFORMATION

Fumes emitted from heated product are irritating to the eyes and respiratory tract. Dust/particles may be the source of physical irritants. Symptoms of overexposure to hydrogen sulfide include insomnia, irritability, headache, fatigue, gastrointestinal problems and loss of sense of smell up to 100 ppm. Exposures to hydrogen sulfide above 100 ppm may cause drowsiness, loss of consciousness, respiratory failure or death.

Certain extracts of asphalt have been shown to produce cancers in laboratory rodents. The carcinogenic potency of asphalt is considered low, provided asphalt is not contaminated with coal tar.

Based on animal and human data, an A4 Not Classifiable as a Human Carcinogen, notation is assigned to asphalt fume.

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION:	Not evaluated at this time.
PRODUCTS OF DEGRADATION:	This product is expected to have a very low rate of biodegradation.
TOXICITY OF THE PRODUCTS OF BIODEGRADATION:	Bioaccumulation of components is unlikely due to very low water solubility.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL:

The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

This material, if discarded as produced, is not a RCRA “listed” hazardous waste.

Disposal of empty containers and container rinseate should at all times comply with all applicable federal, state and local environmental regulations.

SECTION 14: TRANSPORT INFORMATION

REGULATORY INFORMATION	UN NUMBER	EMERGENCY RESPONSE GUIDEBOOK	PROPER SHIPPING NAME	CLASS	PACKING GROUP
DOT Classification	UN3257	Guide 128	Elevated temperature liquid, n.o.s.	9	III

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS:

EXTREMELY HAZARDOUS SUBSTANCES FOR EMERGENCY RESPONSE & PLANNING 40 CFR 355 & 40 CFR 370: Hydrogen Sulfide

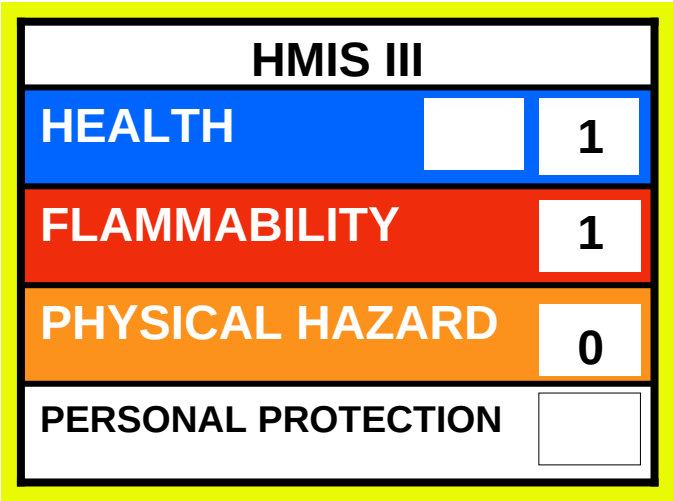
EPA SARA Sections 302, 304, & 313 and CERCLA:
This material contains the following chemicals subject to the reporting requirements of SARA 302, SARA 304, SARA 313, CERCLA and 40 CFR 372:

EPA SARA 311/312 TITLE III HAZARD CATEGORIES:

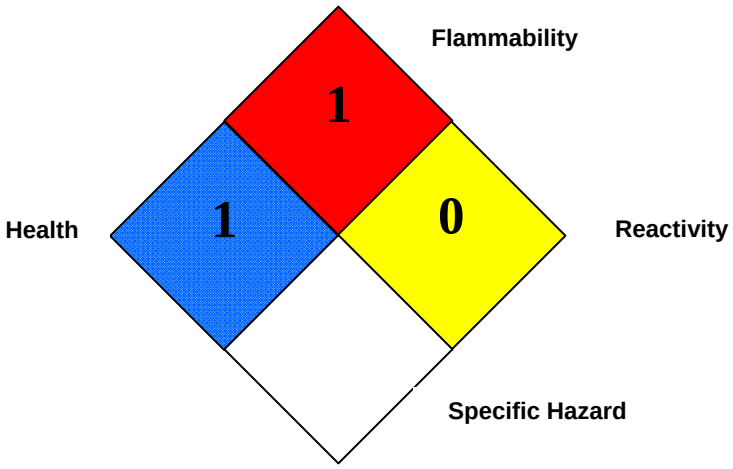
Acute Health Hazard:	**Yes**
Chronic Health Hazard:	**No**
Fire Hazard:	**No**
Pressure Hazard:	**No**
Reactive Hazard:	**No**

SECTION 16: OTHER INFORMATION

HAZARDOUS MATERIAL INFORMATION SYSTEM (USA):



NATIONAL FIRE PROTECTION ASSOCIATION (USA):



DISCLAIMER:

The information in this MSDS was obtained from sources which we believe are reliable. **HOWEVER, THE INFORMATION IS PROVIDED WITHOUT ANY REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, REGARDING ITS ACCURACY OR CORRECTNESS.**

The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. **FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THE PRODUCT.**