

MATERIAL SAFETY DATA SHEET

July 24, 1996
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24 HOUR EMERGENCY ASSISTANCE
PERS 1-800-633-8253

GENERAL MSDS ASSISTANCE
Missouri Petroleum (314) 991-2180
In-Bound WATS - 1-800-392-4295

ACUTE HEALTH*	FIRE	REACTIVITY	HAZARD RATING				
			LEAST	SLIGHT	MODERATE	HIGH	EXTREME
1	2	0	0	1	2	3	4
*FOR ACUTE AND CHRONIC HEALTH EFFECTS REFER TO THE DISCUSSION IN SECTION 3							

SECTION 1 **NAME**

Product **Missouri Petroleum MC30 Liquid Asphalt**
Chemical Name Mixture (See Section 2 A)
Chemical Family Petroleum Hydrocarbon
 Missouri Petroleum
Product Code MC30

SECTION 2A NO.	PRODUCT/INGREDIENT COMPOSITION	CAS NUMBER	PERCENT
P	Missouri Petroleum MC30 Liquid Asphalt	Mixture	100
1	Bitumen	8052-42-4	55-60
2	Kerosene	8008-20-6	40-45
3	Hydrogen Sulfide	7783-06-4	<0.10

SECTION 2B NO.	ACUTE ORAL LD50	ACUTE TOXICITY DATA ACUTE DERMAL LD50	ACUTE INHALATION LC50
P	Not Available		
1	>5.0 G/KG (rat)	>2.0 G/KG (rabbit)	

SECTION 3 **HEALTH INFORMATION**

The health effects noted below are consistent with requirements under the OSHA Hazard Communication Standard (29 CFR 1910.1200).

EYE CONTACT

Based on essentially similar component testing product is presumed to be minimally irritating to the eyes. Contact with product at elevated temperatures can result in thermal burns.

SKIN CONTACT

Based on essentially similar component testing product is presumed to be moderately irritating to the skin. Contact with product at elevated temperatures can result in thermal burns. Prolonged and repeated contact may result in various skin disorders such as dermatitis, folliculitis, oil acne, or skin tumors.

INHALATION

Warning - Hydrogen Sulfide (H2S) and other hazardous vapors may evolve and collect in the headspace of storage tanks or other enclosed vessels. Hydrogen Sulfide is an extremely flammable, toxic gas. Inhalation of vapors, mist or fume (generated at high temperatures) may cause irritation to the nose, throat and respiratory tract, and may result in CNS depression.

INGESTION

Based on essentially similar component testing product is presumed to be no more than slightly toxic if ingested.

SIGNS AND SYMPTOMS

Irritation as noted above. Early to moderate CNS (Central Nervous System) Depression may be evidenced by giddiness, headache, dizziness and nausea; in extreme cases, unconsciousness and death may occur.

AGGRAVATED MEDICAL CONDITION

Preexisting skin and respiratory disorders may be aggravated by exposure to this product.

OTHER HEALTH EFFECTS

The International Agency for Research on Cancer has determined there is sufficient evidence of carcinogenicity for extracts of steam-refined asphalts in experimental animals. See Section 6 for additional health information.

SECTION 4		OCCUPATIONAL EXPOSURE LIMITS			
NO.	OSHA PEL/TWA	PEL/CEILING	TLV/TWA ACGIH	TLV/STEL ACGIH	OTHER
P 3	10 PPM		5 MG/M3* 10 PPM	15 PPM	15 PPM**
*ASPHALT (PETROLEUM) FUMES					**OSHA PEL/STEL

SECTION 5 EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT

Flush with water for 15 minutes while holding eyelids open. Get medical attention.

SKIN CONTACT

If hot asphalt strikes the skin, drench or immerse the area in water to assist cooling. If available, apply iced water or ice packs to the burned area. (Do not use iced water or cold packs if the burned area covers more than 10% of the body, as this may contribute to shock.) Do not try to remove asphalt from a burn after it has cooled. Seek medical attention. If cool asphalt contacts the skin, wash the area with hot soapy water. Use of a waterless hand cleaner will help to remove the asphalt.

INHALATION

Remove victim to fresh air and provide oxygen if breathing is difficult. Give artificial respiration if not breathing. Get Medical attention. Be aware that H2S may be present if victim is unconscious; make sure you are using breathing protection before attempting to remove victim to fresh air.

INGESTION

Do not induce vomiting. In general, no treatment is necessary unless large quantities of product are ingested. However, get medical advice.

NOTE TO PHYSICIAN

Note to the physician: In general, emesis induction is unnecessary in high viscosity, low volatility products, i.e. most oils and greases.

INFORMATION

Breathing asphalt aerosol or asphalt smoke for protracted periods of time has produced damage to the lungs of mice. Among the changes observed were bronchitis, pneumonitis and abscess formation.

Asphalt fume condensates have been shown to produce a tumorigenic response when repeatedly applied to the skin of experimental animals. The relevance of these data to humans is not known at this time.

Repeated dermal application of high levels of middle distillate fuels in experimental animals has produced extremely severe irritation to corrosive action on the skin. Varying degrees of liver and kidney damage were noted in these studies, including congestion, enlargement, mottling, and multifocal necrosis.

Middle distillate fuels have been demonstrated to cause chromosome damage in the in vivo rat bone marrow cytogenetics assay, and mutagenic in the L51 78Y mouse lymphoma assay.

H2S is irritating to the eyes and respiratory tract at low concentrations. 0.02 PPM - odor threshold. 10 PPM eye irritation. 100 PPM - headache, dizziness, vomiting, coughing. 200-300 PPM - eye inflammation, respiratory tract irritation after 1 hour exposure. 300-700 PPM - loss of consciousness or possibly death in 30 min. to an hour. 700-900 PPM - rapid loss of consciousness; death can result. >1000 PPM unconsciousness in seconds; death in minutes unless victim is removed from contaminated area and breathing is restored. Do not depend on sense of smell for warning. H2S causes rapid olfactory fatigue (deadens sense of smell). There is no evidence that H2S will accumulate in the body tissue after repeated exposure.

SECTION 7

PHYSICAL DATA

Boiling Point: Not Available
(Deg F)

Specific Gravity: 0.9303
(H2O = 1)

Vapor Pressure: Not Available
(MM HG)

Melting Point: Not Available
(Deg F)

Solubility: Negligible
(In Water)

Vapor Density: Not Available
(Air = 1)

Evaporation Rate (N-Butyl Acetate = 1): Not Available

Appearance and Odor:
Black Viscous Semisolid. Asphalt Odor.

SECTION 8

FIRE AND EXPLOSION HAZARDS

FLASH POINT AND METHOD:
154 Deg F (Closed Cup)

FLAMMABLE LIMITS/ % VOLUME IN AIR
Lower: N/AV Upper: N/AV

EXTINGUISHING MEDIA

Dry Chemical or foam preferred. Water fog may be used on flat surfaces such as roads.

SPECIAL FIRE FIGHTING PROCEDURES AND PRECAUTIONS

Caution: Combustible. Do not use water on asphalt fire in tank or other containers since it may cause violent eruption and spreading of burning asphalt. Material will not burn unless preheated. Do not enter confined fire space without full bunker gear (helmet with face shield, bunker coats, gloves and rubber boots), including a positive pressure NIOSH approved self-contained breathing apparatus. Cool fire exposed containers with water.

UNUSUAL FIRE AND EXPLOSION HAZARDS

Caution: This material is routinely blended, dispensed and applied at temperatures above the flash point. Therefore, keep away from sources of ignition. Containers exposed to intense heat from fire should be cooled with water. Container areas exposed to direct flame contact should be cooled with large quantities of water as needed. Sulfur Oxides and Hydrogen Sulfide, both of which are toxic, may be released upon combustion. H₂S vapors are heavier than air, may accumulate in low areas and travel along the ground to a remote ignition source; if ignited will flash back to original container

SECTION 9

REACTIVITY

Stability: Stable

Hazardous Polymerization: Will not occur

CONDITIONS AND MATERIALS TO AVOID:

Do not allow molten product to contact water or liquids as this can cause violent eruptions, splatter hot material or ignite flammable materials.

HAZARDOUS DECOMPOSITION PRODUCTS

Thermal decomposition products are highly dependent on the combustion conditions. A complex mixture of airborne solid, liquid, particulates and gases will evolve when this material undergoes pyrolysis or combustion. Carbon monoxide and other unidentified organic compounds may be formed upon combustion.

SECTION 10

EMPLOYEE PROTECTION

RESPIRATORY PROTECTION

If exposure may or does exceed occupational exposure limits (Sec. 4) use a NIOSH-approved respirator to prevent overexposure. In accord with 29 CFR 1910.134 use either an atmosphere-supplying respirator or an air-purifying respirator for organic vapors.

PROTECTIVE CLOTHING

Avoid contact with eyes. Wear safety glasses or goggles as appropriate. Avoid prolonged or repeated contact with skin. Wear gloves and other clothing as required to minimize contact.

SECTION 11

ENVIRONMENTAL PROTECTION

SPILL OR LEAK PROCEDURES

Caution, Combustible. *** Large Spills*** Eliminate potential sources of ignition. Wear appropriate respirator and other protective clothing. Shut off source of leak only if safe to do so. Dike and contain, Remove with vacuum trucks or pump to storage/salvage vessels. Soak up residue with an absorbent such as clay, sand, or other suitable material; place in non-leaking containers and seal tightly for proper disposal. Flush area with water to remove trace residue; dispose of flush solution as above. *** Small Spills*** take up with an absorbent material and place in non-leaking containers for proper disposal.

SECTION 12

SPECIAL PRECAUTIONS

When asphaltic products are heated, they often give off small amounts of Hydrogen Sulfide. Hydrogen Sulfide is an extremely flammable, highly toxic gas. Breathing Hydrogen Sulfide must be avoided. Minimize breathing of vapors, fumes, or mist; when possible, use ventilation or work upwind of source of vapors, fumes and mist. Launder contaminated clothing before using. Discard leather goods when they cannot be decontaminated. Observe good personal hygiene. Wash thoroughly after working with asphalt and before eating or smoking.

SECTION 13

TRANSPORTATION REQUIREMENTS

DEPARTMENT OF TRANSPORTATION CLASSIFICATION:

Flammable Liquid, III

D.O.T. PROPER SHIPPING NAME:

ELEVATED TEMPERATURE LIQUID, flammable,
n.o.s., with flash point above 37.5 C, at or above its flashpoint

OTHER REQUIREMENTS:

3, UN 3256, PG 111,

SECTION 14

OTHER REGULATORY CONTROLS

The components of this product are listed on the EPA/TSCA Inventory of Chemical Substances. Protection of stratospheric ozone (pursuant to Section 611 of the Clean Air Act Amendments of 1990): per 40 CFR Part 82, this product does not contain nor was it directly manufactured with any Class I or Class 11 ozone depleting substances.

In accordance with SARA Title 111, Section 313, the attached Environmental Data Sheet (EDS) should always be copied and sent with the MSDS.

SECTION 15

STATE REGULATORY INFORMATION

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

STATE LISTED COMPONENT	PERCENT	STATE CODE
Bitumen (CAS NO: 8052-42-4)	55-60	CA, CT, FL, IL, LA, MA, ME, MN, NJ, PA, RI
Kerosene (CAS NO: 8008-20-6)	40-45	CT, FL, LA, MA, NJ, PA, RI
Hydrogen Sulfide (H2S) (CAS NO: 7783-06-4)	< 0.1	MA

CA = California Haz. Subst. List; CA65 = California Safe Drinking Water and Toxics Enforcement Act list; CT = Connecticut Toxic Subst. List; FL = Florida Subst. List; 11 = Illinois Tox. Subst. List; LA = Louisiana Haz. Subst. List; MA = Massachusetts Subst. List; ME = Maine Haz. Subst. List; MN = Minnesota Haz. Subst. List; NJ = New Jersey Haz. Subst. List; PA = Pennsylvania Haz. Subst. List; RI = Rhode Island Haz. Subst. List.

SECTION 16

SPECIAL NOTES

Revisions were made in section 13

The information contained herein is based on the data available to us and is believed to be correct. However, Missouri Petroleum makes no warranty, expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. Missouri Petroleum assumes no responsibility for injury from the use of the product described herein.

date prepared: July 24, 1996

BE SAFE

**READ OUR PRODUCT
SAFETY INFORMATION ... AND PASS IT ON
(PRODUCT LIABILITY LAW REQUIRES IT)**

SEE SUPPLEMENTAL ENVIRONMENTAL DATA ON PAGE 7 OF 7

ENVIRONMENTAL DATA

Product Missouri Petroleum MC30 Liquid Asphalt

Product Code MC30

SECTION 1		PRODUCT/COMPOSITION	CAS NUMBER	PERCENT
NO.		COMPONENT		
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1		Bitumen	8052-42-4	55-60
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SECTION 2		SARA TITLE III INFORMATION			
NO.	EHS RQ (LBS)	EHS TPQ (LBS)	SEC 313	313 CATEGORY	311/312 CATEGORIES
	(*1)	1* 2)	(*3)	(*4)	(*5)
P					H-1, H-2, P-3
3	100	100			H-1, P-3

FOOTNOTES

*1 = Reportable quantity of extremely hazardous substance, SEC. 302

*2 = Threshold planning quantity, extremely hazardous substance, SEC 302 *3 = Toxic Chemical, SEC 313

*4 = Category as required by SEC 313 (40 CFR 372.65 C). Must be used on toxic release inventory form.

*5 = Hazard category for SARA SEC. 311/312 reporting.

Health H-1 Immediate (Acute) health hazard. H-2 = Delayed (Chronic) health hazard.

Physical P-3 Fire hazard. P-4 = Sudden release of pressure hazard. P-5 = Reactive hazard.

SECTION 3 ENVIRONMENTAL RELEASE INFORMATION

Under EPA-CWA, this product is classified as an oil under Section 311. Spills into or leading to surface waters that cause a sheen must be reported to the National Response Center. 800-424-8802.

SECTION 4 RCRA INFORMATION

Under EPA - RCRA (40 CFR 261.21), if this product becomes a waste material, it would be ignitable hazardous waste, hazardous waste number D001 . Refer to latest EPA or State regulations regarding proper disposal.

The information contained in this Environmental Data Section of the MSDSMC30.SDS publication is based on data available to us at the time of publication and is believed to be correct. However, Missouri Petroleum makes no warranty, expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. Missouri Petroleum assumes no responsibility for injury from the use of the product described herein.

Date prepared: July 24, 1996

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