



MATERIAL SAFETY DATA SHEET
Cutback Asphalt
MC-30, MC-70, MC-250, MC-800, MC-3000
Fm2B2, Fm 2B3, Fm3B2, Fm3B3, Fm4B2, Fm4B3

1. Product Identification

Product Name: MC-30, MC-70, MC-250, MC-800, MC-3000, Fm2B2, Fm 2 B 3, Fm 3 B 2, Fm 3 B 3, Fm 4 B 2, Fm 4 B 3

CAS Number: Mixture

Chemical Family: Complex Petroleum Hydrocarbon Mixture **MSDS**

Number: 103

Synonyms:

MC CUTBACK ASPHALT, CUTBACK BITUMEN, MEDIUM CURE ASPHALT, PRIME ASPHALT
CUT-BACK BITUMINOUS BINDERS

2. Composition/Information On Ingredients

Ingredient Name	CAS Number	Percent Of Total Weight
ADDITIVES A, Proprietary, Non-hazardous	Mixture	0 - 1
ANTISTRIP, Proprietary	68334-30-5	0 - 2
KEROSENE	8052-42-4	0-50
DISTILLATES(PETROLEUM)	68955-27-1	0-45
PETROLEUM SOLVENT	68476-30-2	0-45
PETROLEUM ASPHALT(BITUMEN)	8052-42-4	> 50

Asphalt: Asphalt is a complex mixture of high molecular weight hydrocarbons produced from crude petroleum. Composition varies depending on the source of crude and the specifications of the final product.

Hydrogen Sulfide: Trace amounts of Hydrogen Sulfide may be present as a naturally occurring constituent in the petroleum stream and are not added separately to the product.

3. Hazards Identification

Eye Hazards

Contact with hot cutback asphalt can cause thermal burns to the eyes. Prolonged exposure to vapors, fumes, or mists may cause irritation, redness, and tearing.



3. Hazards Identification - Continued

Skin Hazards

Contact with hot cutback asphalt can cause thermal burns. Prolonged exposure to vapors, fumes, or mists may cause irritation and redness. **Ingestion Hazards**

Ingestion is not likely. Ingestion may cause thermal burns. If ingestion of molten material occurs, keep victim's head below their hips to prevent asphalt from reaching the lungs. Take the victim to obtain medical assistance immediately.

Inhalation Hazards

Breathing vapors, fumes, or mists may cause irritation to nasal and respiratory tract and central nervous system effects. Symptoms may include labored breathing, sore throat, coughing, wheezing, headache, and nausea. Some asphalts may contain sulfur compounds which may form Hydrogen Sulfide when heating.

Exposure to lower concentrations of Hydrogen Sulfide can result in eye irritation, sore throat and cough, nausea, shortness of breath, and fluid in the lungs. Long-term, low level exposure may result in fatigue. Loss of appetite, headaches, irritability, poor memory, and dizziness.

0.02 ppm	Odor threshold.
10 ppm	8-hours per day exposure limit to Hydrogen Sulfide.
10-20 ppm	Borderline concentration for eye irritation.
10 -100 ppm	Leads to eye damage.
100-150 ppm	Olfactory nerve paralyzed after a few minutes, sense of smell disappears, and often awareness of danger.
320-530 ppm	leads to pulmonary edema with the possibility of death.
530-1,000 ppm	Causes strong stimulation of the central nervous system and rapid breathing.
800 ppm	lethal concentration of 50% of humans for 5-minute exposure (LC ₅₀).
>1,000 ppm	immediate collapse with loss of breathing, even after inhalation of a single breath.

Do not depend on sense of smell for warning. Hydrogen Sulfide causes rapid olfactory fatigue (deadens sense of smell).

4. First Aid Measures

Eye

Gently flush immediately with cold water for 15 minutes. Do not attempt to remove solidified material from the eye, as this may further injury. Take the victim to obtain medical assistance.

Skin

Hot Molten Material - Cool the affected body parts immediately by submerging in cold water until the material has cooled. Do not attempt to remove solidified material from the burn area as this may further tissue damage. Take the victim to obtain medical assistance immediately.

Cold Material - Remove cold asphalt by soaking dressing in mineral oil and place over affected area for 2-3 hours. If irritation occurs, call a physician.

Never try to remove the material with solvents.

Ingestion

Ingestion is not likely. If large amounts are swallowed, do not induce vomiting and immediately call a physician.

Inhalation

If irritation occurs from inhalation overexposure, immediately remove victim from source to fresh air and seek medical attention.



5. Fire Fighting Measures

Flash Point: >38 °C

Auto ignition Point: >210°C Lower

Explosive Limit: 0.7 Upper

Explosive Limit: 7.5 Fire and

Explosion Hazards

Cutback Asphalts at elevated temperatures may be above their flashpoints and therefore extremely flammable.

May produce severe burns on contact.

May produce hydrogen sulfide (H₂S) gas in confined spaces or closed containers.

Vapors can explode. Extinguishing Media

Foam, Carbon Dioxide, Dry Chemical, and Water Spray may all be suitable in extinguishing fires involving this product. Fire Fighting Instructions

Avoid water streams to prevent frothing. Use water spray to cool exposed surfaces and to assist in solidifying asphalt material.

6. Accidental Release Measures

Stop source of leak. Eliminate sources of ignitions. Contain by diking or impounding. Absorbents can be used to contain spill. After containment, cutback asphalt can be collected for disposal. Advise authorities if product has entered a sewer or water source. Assure conformity with local, state, and federal governmental regulations for disposal.

7. Handling and Storage

Handling and Storage Precautions

When opening covers and outlet cap on storage tanks, use face shield and gloves to avoid possible injury from pressurized asphalt. Hydrogen sulfide can be generated and accumulated in storage tanks and bulk transport compartments. Stay upwind and vent storage hatches before unloading. Keep heating units and flues in storage tanks covered with at least 12 inches of asphalt. Do not overheat.

Hot Flash Warning: Studies have shown that relatively low flash point substances such as low boiling hydrocarbons and hydrogen sulfide may accumulate in the vapor space of hot storage tanks and bulk transport compartments. Such vapors may exhibit high flammability characteristics when stored above their flash point. As a precaution, keep ignition sources away from vents and openings. Asphalt Institute publication IS-180 contains further information and guidance of the safe storage and handling of asphalt primes.

Empty Container Warning: Empty containers retain residue (liquid and/or vapor) and can 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.

Hot material (above 100° C) contact with water results in a violent expansion as water turns to steam. This can lead to a dangerous boil over and a pressurized container or cargo tank, which can cause damage, rupture of the container or cargo tank, and thermal burn injuries. Never load hot asphalt product into cargo tanks with water condensation or emulsion residue from previous load without servicing the cargo tank. Keep away from incompatible materials.



7. Handling and Storage - Continued

Work/Hygienic Practices

Skin contact and the breathing of mists, fumes, or vapors should be reduced to a minimum to avoid any ill effects. Thoroughly wash exposed skin areas after work to avoid dermatitis. Consider the use of lanolin skin treatments before handling or working around asphalt mixtures.

8. Exposure Controls/Personal Protection

Eye/Face Protection

Safety goggles or chemical splash goggles if splashing is anticipated.

Skin Protection

Insulated, oil impervious gloves (hot asphalt)/Cloth Gloves (cold asphalt). Long sleeve shirts and long pants should be worn at all times around hot asphalt to prevent thermal burns.

Respiratory Protection

Respiratory protection is not normally required under normal conditions and adequate ventilation. If high vapors are expected, use respirator approved for organic vapors.

Other/General Protection

Wear body-covering clothes to avoid prolonged or repeated exposure. Launder before reuse.

Ingredient(s) - Exposure Limits

ADDITIVES A, Proprietary, Non-hazardous OSHA PEL:

Not established for this material.

ANTISTRIP, Proprietary

OSHA PEL: Not established for this material.

KEROSENE:

OSHA PEL: Not established for this material.

DISTILLATES (PETROLEUM):

OSHA PEL: Not established for this material.

PETROLEUM SOLVENT:

OSHA PEL: Not established for this material.

PETROLEUM ASPHALT

OSHA PEL: Not established for this material.

ACGIH TLV: 0.5 mg/m³ as benzene-extractable inhalable particulate (or equivalent method). NIOSH

REL: 5.0 mg/m³ as a 15-minute ceiling limit measured as total particulates

HYDROGEN SULFIDE

ACGIH 8-hr TLV: 1 ppm (1.4 mg/m³)

ACGIH 15-min STEL: 5 ppm (7 mg/m³)



9. Physical and Chemical Properties

Appearance

Black/Brown Liquid

Odor

Characteristic Asphalt Odor

Chemical Type: Mixture

Physical State: Liquid

Boiling Point: 176 °C **Specific**

Gravity: 0.87-1.01

Molecular Weight: 300

Vapor Pressure: 5-50 mm Hg @ 100 F

PH Factor: N.A.

Solubility: Negligible

10. Stability and Reactivity

Stability: Stable

Hazardous Polymerization: Will not occur.

Incompatible Materials

Strong Oxidizers **Hazardous Decomposition**

Products

Fumes, Smoke, Carbon Monoxide, Hydrogen Sulfide, Sulfur Dioxide, Aldehydes, and Hydrocarbons

11. Toxicological Information

Health Hazard Characterization:

Uncertainties exist in the hazard characterization of asphalt fumes by many factors including its chemical complexity, limitation of the information, the inclusion of coal tar in asphalts in past decades, other confounders and mixed results of human studies. Concise International Chemical Assessment Documents relating to asphalt and fumes can be obtained on the internet at <http://inchem.org/documents/cicads/cicads/cicad59.htm>. Despite conflicting reports, the following bullet points should be noted:

- i. Currently classified as A4 (not classifiable as a human carcinogen). Asphalt Coal Tar Free
- ii. Breathing of mists, fumes, or vapors should be reduced to a minimum to avoid any ill effects.
- iii. Asphalt and asphalt fumes contain trace levels of polynuclear aromatic hydrocarbons that are known carcinogens.
- iv. Chronic health effects would not be expected as long as good hygiene and proper safety precautions are practiced and exposures are less than the TLVs/RELS.
- v. After using material or being around fumes, wash exposed areas thoroughly with soap and water. Showering immediately after work is a good personal hygiene practice.

KEROSENE and DISTILLATES (PETROLEUM) and PETROLEUM SOLVENT: Lifetime skin painting studies in animals with similar distillate fuels have produced weak carcinogenic activity following prolonged and repeated exposure. Repeated dermal application has produced severe irritation and systematic toxicity in sub-acute toxicity studies. Some components of distillate fuels, i.e., paraffin's and olefins, have been shown to produce a species specific, sex hormonal dependent kidney lesion in male rats from repeated oral or inhalation exposure. Jet Fuel and No. 1 fuel oil were found to be positive in a few mutagenicity tests while negative in the majority of others. The exact relationship between these results and human health is not known. Chronic human health effects would not be expected as long as good personal hygiene and proper safety precautions are practiced.



12. Ecological Information

May cause fouling of water. May be toxic to aquatic animals. Once solidified, this product will no longer exhibit these characteristics.

13. Disposal Considerations

Dispose in accordance with local, state, and federal regulations. After cooling, waste or contaminated asphalt mixtures may be scooped and stockpiled for later recycling into asphalt pavement mixtures, pug milled into cold mix, or disposed in an approved special waste, industrial, or construction debris landfill.

14. Transport Information

Proper Shipping Name

Tars, Liquid, Cut back, Asphalt, Bitumen

Hazard Class

3 (Packing Group III)

DOT Identification Number

UN1999

DOT Shipping Label Flammable Liquid

High temperature asphalt product normally shipped ABOVE its flash point.

15. Regulatory Information

NFPA	HMIS								
	<table><tr><td>HEALTH</td><td>1</td></tr><tr><td>FLAMMABILITY</td><td>3</td></tr><tr><td>REACTIVITY</td><td>0</td></tr><tr><td>PERSONAL PROTECTION</td><td></td></tr></table>	HEALTH	1	FLAMMABILITY	3	REACTIVITY	0	PERSONAL PROTECTION	
HEALTH	1								
FLAMMABILITY	3								
REACTIVITY	0								
PERSONAL PROTECTION									

Personal Protection Equipment (PPE):



16. Other Information

Precautionary Label

WARNING - COMBUSTIBLE LIQUID
WARNING - FLAMMABLE LIQUID (if heated above 60°C)
WARNING - HOT PETROLEUM ASPHALT
May cause severe burns on contact.
Harmful or fatal if swallowed.
Vapors can explode.
Avoid prolonged breathing of vapors.