



CM-90

SDS Number: AMI-350

Revision Date: 2/1/2019

Page 1 of 7

1 PRODUCT AND COMPANY IDENTIFICATION

Manufacturer

Asphalt Materials, Inc.
5400 W. 86th Street
Indianapolis, Indiana 46268

Vendor

Asphalt Materials, Inc.
5400 W. 86th Street
Indianapolis, Indiana 46268

Emergency: CHEMTREC: 800-424-9300
Contact: Keith Toombs
Phone: 317-872-6010
Fax: 317-874-4900
Email: ktoombs@asphalt-materials.com
Web: www.asphalt-materials.com

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Product Name: CM-90
Revision Date: 2/1/2019
SDS Number: AMI-350
Common Name: Cutback Asphalt
CAS Number: Mixture
Chemical Family: Complex Petroleum Hydrocarbon Mixture
Synonyms: Multigrade Asphalt
Product Use: Highway Paving Applications and Mixtures

2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS):

Health, Acute toxicity, 5 Inhalation
Physical, Flammable Liquids, 3
Health, Acute toxicity, 5 Dermal
Health, Serious Eye Damage/Eye Irritation, 2 B

GHS Label elements, including precautionary statements

GHS Signal Word: **WARNING**

GHS Hazard Pictograms:



GHS Hazard Statements:

H333 - May be harmful if inhaled. Vapors containing hydrogen sulfide may accumulate during storage or transport. High level (700 ppm) acute exposure can result in sudden death.
H226 - Flammable liquid and vapor
H313 - May be harmful in contact with skin
H320 - Causes eye irritation

GHS Precautionary Statements:

P202 - Do not handle until all safety precautions have been read and understood.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P210 - Keep away from heat/sparks/open flames/hot surfaces. No smoking

Hazards not otherwise classified (HNOC) or not covered by GHS



CM-90

SDS Number: AMI-350

Revision Date: 2/1/2019

Page 2 of 7

Inhalation:

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.

At normal temperatures and pressures, this product is not likely to present an inhalation hazard. However, when heated, high concentrations of vapor may irritate the respiratory tract and hydrogen sulfide, a highly toxic gas, may be present. Inhaling hydrogen sulfide released from hot products in enclosed areas may cause unconsciousness, convulsions, suffocation, coma, and death. Signs and symptoms of overexposure to hydrogen sulfide include respiratory and eye irritation, dizziness, nausea, coughing, a sensation of dryness and pain in the nose, and loss of consciousness.

Hydrogen Sulfide effects:

- 0.02 ppm Odor threshold.
- 10 ppm 8-hour 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 central nervous system and rapid breathing.
- 800 ppm Lethal concentration of 50% of humans for a 5-minute exposure (LC50).
- >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).

Skin Contact:

Contact with hot CM Multigrade asphalt can cause thermal burns. Prolonged exposure to vapors, fumes, or mists may cause irritation and redness.

Eye Contact:

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

3 COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients:

Cas#	%	Chemical Name
8052-42-4	>70%	Asphalt (typical)
0	0-5%	Antistrip Adhesion Promoter, Proprietary
8008-20-6	<8%	Kerosene
68476-30-2	<8%	Fuel oil no. 2
65997-01-5	1-5%	Tall oil, sodium salt

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

ACGIH: The American Conference of Governmental Industrial Hygienists recommends an exposure limit of 0.5 mg/m³ as benzene-extractable inhalable particulate (or equivalent method) to avoid irritation of the conjunctive mucous membranes. Historical information on exposure of asphalt workers used methods different than those recommended by ACGIH, so comparisons to the recommended exposure limits are not known.

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.



CM-90

SDS Number: AMI-350

Revision Date: 2/1/2019

Page 3 of 7

4 FIRST AID MEASURES

- Inhalation:** If irritation occurs from inhalation overexposure, immediately remove victim from source to fresh air and seek medical attention.
- Skin Contact:** 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 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 material with solvents.
- Eye Contact:** 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 victim to obtain medical assistance.
- Ingestion:** Ingestion is not likely. If large amounts are swallowed, do not induce vomiting and immediately call a physician.

5 FIRE FIGHTING MEASURES

- Flammability:** NFPA Class IIIA
- Flash Point:** >150°F
- Flash Point Method:** Pensky-Martens Closed Cup
- Autoignition Temp:** >410°F
- LEL:** 0.7%
- UEL:** 7.5%

Fire and Explosion Hazards:

- CM Multigrade 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, closed containers, and tank headspaces.
- 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 hot asphalt material.

6 ACCIDENTAL RELEASE MEASURES

Stop source of leak if safe to do so. Eliminate sources of ignition. Contain by diking or impounding. Absorbents can be used to contain small spills. After containment and solidification, asphalt can be collected for disposal. Advise authorities if product has entered a drainage sewer or a water source. Assure conformity with local, state, and federal government regulations for disposal.

7 HANDLING AND STORAGE

- Handling Precautions:** When opening covers and outlet caps on storage tanks, use faceshield and gloves to avoid possible injury from pressurized hot asphalt. Long sleeved shirts and pants should be worn to minimize thermal burns. Hydrogen Sulfide can be generated and accumulated in storage tanks and bulk transport compartments. Stay upwind and vent storage tanks 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 for the safe storage and handling of asphalt primes.



CM-90

SDS Number: AMI-350

Revision Date: 2/1/2019

Page 4 of 7

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 BURN OR EXPLODE AND CAUSE INJURY OR DEATH.

Hot Material Warning: Hot material (above 212°F) contact with water results in a violent expansion as water turns to steam. This can lead to a dangerous boilover 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 the previous load without servicing the cargo tank. Keep away from incompatible materials.

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

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:

Local or general exhaust required if in an enclosed area to remain below the TLV. If workplace exposure limits are exceeded, a NIOSH/MSHA-approved air-supplied respirator is advised in the absence of proper environmental engineering controls.

Personal Protective Equipment:

Eye and Face Protection: Safety glasses or chemical splash goggles should be worn with faceshield if splashing is anticipated.

Skin Protection: Insulated, oil-impervious gloves for hot asphalt or cloth gloves for 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 a respirator approved for organic vapors. Observe respirator protection factor criteria cited in ANSI Z88.2 (1980) and other OSHA requirements found in 29 CFR 1910.134. Use air-supplied respirators or self-contained breathing apparatus for fire fighting and in confined spaces when asphalt vapor or Hydrogen Sulfide gas exceeds permissible limits.

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.

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

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.

ANTISTRIP ADHESION PROMOTER, Proprietary:

OSHA PEL: Not established for this material.

KEROSENE:

OSHA PEL: Not established for this material.

No. 2 FUEL OIL

OSHA PEL: Not established for this material

TALL OIL, SODIUM SALT:

OSHA PEL: Not established for this material.

HYDROGEN SULFIDE:

ACGIH TLV: 1 ppm (1.4 mg/m³) for 8 hours
ACGIH STEL: 5 ppm (7 mg/m³) for 15 minutes



CM-90

SDS Number: AMI-350

Revision Date: 2/1/2019

Page 5 of 7

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Black/Brown Liquid when hot.	Odor:	Characteristic asphalt odor
Physical State:	Solid when cold, Liquid when hot.	Solubility:	Negligible
Spec Grav./Density:	0.87 - 0.96	Softening Point:	110 degrees F and above
Viscosity:	Thin fluid when hot. Solid when cold.	Freezing/Melting Pt.:	115 - 130°F
Boiling Point:	350°F	Flash Point:	>150°F
Flammability:	NFPA Class IIIA Combustible	Vapor Density:	Lighter than air
Vapor Pressure:	1.3 E-4 psia	Bulk Density:	7.36 - 8.12 lb./gallon
Evap. Rate:	Negligible	Auto-Ignition Temp:	>410°F
Molecular weight:	300	UFL/LFL:	7.5% / 0.7%
Decomp Temp:	>750 F		

10 STABILITY AND REACTIVITY

Chemical Stability:	Product is stable under normal conditions.
Conditions to Avoid:	Contact with oxidizers
Materials to Avoid:	Strong Oxidizing Agents.
Hazardous Decomposition:	Fumes, smoke, carbon monoxide, hydrogen sulfide, aldehydes, and hydrocarbons.
Hazardous Polymerization:	Will not occur.

11 TOXICOLOGICAL INFORMATION

International Agency for Research on Cancer Ruling

Occupational exposures to straight-run bitumens and their emissions during road paving:
On the basis of an earlier meta-analysis, the IARC multi-center study and several more recent independent studies, the Working Group concluded that there was inadequate evidence in humans for the carcinogenicity of occupational exposures during road paving with straight-run bitumens. Also, there was inadequate evidence in experimental animals for the carcinogenicity of extracts and of fume condensates of this type of bitumens. However, studies of workers exposed to bitumen emissions during paving with straight-run bitumens showed mutagenic and genotoxic/cytogenetic effects in these workers. Similar effects were also observed in experimental systems under controlled conditions. This strong mechanistic evidence led to the classification of occupational exposures to straight-run bitumens and their emissions during road paving as "possibly carcinogenic to humans" (Group 2B).

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:

- Currently classified as A4 (not classifiable as a human carcinogen). Asphalt Coal Tar Free
- Breathing of mists, fumes, or vapors should be reduced to a minimum to avoid any ill effects.
- Asphalt and asphalt fumes contain trace levels of polynuclear aromatic hydrocarbons that are known carcinogens.
- 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.
- 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 No. 2 FUEL OIL:

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 subacute toxicity studies. Some components of distillate fuels, i.e., paraffins 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, pugmilled into cold mix, or disposed in an approved special waste, industrial waste, or construction debris landfill.

RCRA Information:

This material, if discarded as produced, is not a RCRA "listed" hazardous waste. Use which results in chemical or physical change or contamination may subject it to regulation as a hazardous waste. It is the responsibility of the generator to fully characterize for toxicity and other RCRA parameters prior to disposal (40 CFR 261). Along with properly characterizing all waste materials, consult state and local regulations regarding proper disposal of this material.

14 TRANSPORT INFORMATION

UN3256, Elevated temperature liquid, flammable, n.o.s., with flash point above 37.8 C, at or above its flash point, 3, PGIII, (Contains Asphalt and Petroleum Distillates)

Packaging Requirements - Bulk: 49 CFR 173.247

Packaging Requirements - Non-Bulk: None

Packaging Exceptions: None

High temperature asphalt product normally shipped ABOVE its flashpoint. If shipped below the flashpoint, other proper DOT shipping descriptions may be applicable.

15 REGULATORY INFORMATION

Component (CAS#) [%] - CODES

Asphalt (typical) (8052-42-4) [>70%] MASS, NRC, PA, TSCA, TXAIR

Antistrip Adhesion Promoter, Proprietary (0) [0-5%]

Kerosene (8008-20-6) [<8%] MASS, PA, TSCA

Fuel oil no. 2 (68476-30-2) [<8%] TSCA

Tall oil, sodium salt (65997-01-5) [1-5%] TSCA

Regulatory CODE Descriptions

MASS = MA Massachusetts Hazardous Substances List

NRC = Nationally Recognized Carcinogens

PA = PA Right-To-Know List of Hazardous Substances

TSCA = Toxic Substances Control Act

TXAIR = TX Air Contaminants with Health Effects Screening Level

SARA Section 313 Notification:

This product contains the following toxic chemicals that are subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and 40 CFR 372:

Polycyclic Aromatic Compounds (PACs) (Category N590)

Hydrogen Sulfide (CASRN 7783-06-4) is found in varying trace amounts 0-1% depending on temperature, source of crude, etc.

This information must be included on all SDSs that are copied and distributed for this material.



16

OTHER INFORMATION

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained therein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s).

Asphalt Materials, Inc.