

MATERIAL SAFETY DATA SHEET

UNIQUE PAVING MATERIALS CORPORATION

Date Prepared: September 26, 2006

Date Reviewed: January 12, 2008

LIQUIFIED PETROLEUM ASPHALT CRACK FILLER

1.0 PRODUCT AND COMPANY IDENTIFICATION

Product Name(s): Kold Flo® Pourable Crack Filler

Company: Unique Paving Materials Corporation
3993 East 93rd Street
Cleveland, Ohio 44105

Emergency Telephone Numbers: (216) 341-7711 (8:00 am-4:30 pm Mon-Fri)
(800) 424-9300 CHEMTREC

2.0 COMPOSITION / INFORMATION ON INGREDIENTS

<u>Ingredients</u>	<u>CAS Number</u>	<u>% By Weight</u> <u>Kold Flo</u>
Petroleum Asphalt Base	8052-42-4	45-55
Water	7732-18-5	27-30
Clay/Mineral Filler	1332-58-7 (a)	13-20
Synthetic Rubber	9010-98-4 (b)	2-4

(a) CAS registration number for kaolin clay (hydrous aluminum silicate)

(b) CAS registration number for poly (2-chloro-1,3-butadiene) and co-polymers

While this material is not classified as hazardous under OSHA regulations, this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.

3.0 HAZARDS IDENTIFICATION

Potential Health Effects and Symptoms of Exposure

Eyes: Irritation.

Skin: Prolonged or repeated contact may cause irritation and/or dermatitis, including possible allergic dermatitis.

Swallowing: Swallowing these materials can cause stomach irritation, nausea and vomiting. The severity of the symptoms depends on the amount ingested. However, it is unlikely that people working with these materials would swallow them.

Inhalation: Breathing the vapors from these materials can irritate the nose, throat and lungs, and may make it difficult to breathe.

Cancer Information: The International Agency for Research on Cancer (IARC) has determined that there is sufficient evidence for the carcinogenicity of asphalt fumes (refined bitumens) in experimental animals, but not in humans. (See Section 11.0 Toxicological Information).

Developmental and Reproductive Effects: Currently no information is available on the potential effects that exposure to these products may have on a person's ability to conceive a child or on the embryonic and fetal development of a child.

4.0 FIRST AID MEASURES

Eyes: If this material gets into the eyes, flush the person's eyes with large amounts of water for at least fifteen (15) minutes. Be certain to lift the upper and lower lids to ensure that all of the material is flushed out of the eyes. Obtain medical attention if the irritation persists.

Skin: Immediately remove any contaminated clothing and wash the affected areas of skin with soap and water. Do not use solvents or thinners to remove these materials from the skin. Launder contaminated items of clothing before wearing. If skin irritation or redness persists or develops after exposure, contact a physician.

Inhalation: Move the individual to fresh air away from the fumes. If he/she is having difficulty breathing or is not fully conscious, administer oxygen and obtain immediate medical attention.

Swallowing: Do not induce vomiting. Vomiting can cause the material to be aspirated into the lungs, causing chemical pneumonitis. This can be fatal. Keep the person warm and quiet. Obtain immediate medical attention.

Note: Seek immediate medical attention for over-exposure.

5.0 FIRE FIGHTING MEASURES

Flash Point: Greater than 300° F (Cleveland Tag Open Cup method)

Explosive Limit: Not applicable. **Flammable Limit:** Not established.

Extinguishing Media: Carbon dioxide foam, dry chemical and water fog.

Fire Fighting Instructions: Use a light water spray to cool exposed surfaces. A self-contained breathing apparatus with a full-face piece operating in a positive pressure mode may be required. Avoid using a water stream to prevent frothing. Water or foam may cause frothing which can be violent and may present a life-threatening situation. Frothing is most likely to occur when streams of water or foam are sprayed into hot or burning containers.

Fire and Explosion Hazards: Never use a welding or cutting torch on or near drums of this material (even empty drums) because the material can ignite explosively.

Hazardous Products of Combustion: Carbon monoxide and other toxic organic compounds may be formed upon combustion.

6.0 ACCIDENTAL RELEASE MEASURES

Small Spill: Absorb liquid with paper, vermiculite or other absorbent material. Use soap and water for final cleanup. Avoid inhaling the vapors or getting the spilled liquid on the skin. People performing cleanup should wear appropriate protective clothing.

Large Spill: Eliminate all flames and other potential sources of ignition. Contain spilled material with a dike and pump any salvageable material into clean containers for reuse. Mix any remaining liquid with sand, vermiculite or other absorbent material and shovel the mixture into containers. Wear protective clothing during the cleanup.

Waste Disposal Method: Place the spilled material into closed containers and dispose in an approved landfill according to local, state and federal regulations.

7.0 HANDLING AND STORAGE

Store in a cool, dry well-ventilated area away from heat and flame. Keep these products from freezing. Do not store these materials for more than six (6) months before using. Empty containers may contain enough residue to emit vapors or to be combustible. Dispose of used containers according to local, state and federal requirements.

8.0 EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection: Normal ventilation is usually adequate. However, if this material is being handled in a confined area, wear a respirator with a NIOSH-approved organic vapor respiratory cartridge, or NIOSH-approved air supplied breathing equipment to prevent inhaling fumes. A respirator is only required when working with this material in a confined or inadequately ventilated area. Provide sufficient ventilation (mechanical ventilation such as a general or local exhaust system) to prevent vapors from accumulating and to maintain exposure levels below TLV(s).

Eye and Skin Protection: Wear a face shield or safety glasses, impervious clothing, or apron, rubber gloves and boots.

Hygiene Practices: Wash hands thoroughly after working with this material. Remove and launder contaminated clothing before wearing. Eye baths and emergency showers should be available for people working with these materials.

Exposure Guidelines: The following occupational exposure guidelines are for the major ingredients in this material. Major ingredients comprise greater than 1% of the product formulation. The Permissible Exposure Limit (PEL) and the Threshold Limit Value (TLV) are expressed in parts per million (PPM) or mg/cubic meter of the ingredient in the workplace air.

<u>Ingredient</u>	<u>PEL</u>	<u>TLV</u>
Petroleum Asphalt Base (a)	5 ppm	5 ppm
Water	N/E	N/E
Clay/Mineral Filler (b)	15 mg/cu.m.	15 mg/cu.m.
Styrene-butadiene co-polymer	N/E	N/E

(a) As fumes

(b) As dust.

N/E: Not Established

9.0 PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point: 212° F

Specific Gravity: Greater than water

Vapor Density: Heavier than air

Evaporation Rate: Slower than ether

Percent Volatile: Kold Flo: 0-30% by volume

Solubility in Water: Can be dispersed in water.

Odor, Appearance and Color: Dark brownish-gray viscous liquid with asphalt petroleum odor.

10.0 STABILITY AND REACTIVITY

Hazardous Polymerization: This material is not known to undergo hazardous polymerization.

Hazardous Decomposition: Carbon monoxide and other potentially hazardous toxic vapors and organic compounds may be formed when this material burns.

Chemical Stability: Stable

Incompatibility: Avoid contact with strong acids, oxidizing agents and petroleum solvents and soaps to preserve the quality of this material.

11.0 TOXICOLOGICAL INFORMATION

The relevant toxicological information for the major components of Kold-Flo is summarized below.

Petroleum Asphalt: The International Agency for Research on Cancer (IARC) has determined that there is sufficient evidence to classify extracts of refined bitumens (the primary components of asphalt) as carcinogenic in experimental animals. Studies on workers exposed to asphalt fumes have not produced conclusive evidence of an increased risk of cancer. Some epidemiologic studies have shown no increased risk of cancer among exposed workers, while some studies have shown a slightly increased risk of lung, other respiratory tract and gastrointestinal tract cancers. In those studies where an increased risk of cancer was reported, a number of the workers who were included in the studies also may have been exposed to coal tar products other than asphalt. Consequently, the increased risk may not be exclusively attributable to exposure to asphalt fumes.

Dermal applications of undiluted (hot) asphalt to experimental animals have reportedly produced skin tumors at the site of application. However, these findings should be interpreted with caution because the applications may have caused burns and irritation that could have been related to tumor production. Solvent dilutions of different types of asphalt have been evaluated in chronic skin

painting studies. Condensates from asphalt fumes diluted in solvent have also been tested in skin painting studies. Skin tumors have been reported in these types of studies on laboratory animals. The conditions under which the studies were conducted may not be representative of the conditions to which people working with these materials are likely to be exposed. However, exposure to asphalt can produce skin irritation in people who get these materials onto their skin.

Extracts of asphalt tested in a modified Ames Assay gave negative or slightly positive findings (mutagenicity index <1.5). Fume condensates derived from heating asphalt to high temperatures (>450 ° F) were moderately mutagenic (mutagenicity index 4-9). By comparison, fumes generated from coal tar pitch were >1000 times more mutagenic in the Ames Assay than asphalt.

Some small amount of hydrogen sulfide may be released from asphalt. Hydrogen sulfide gas, which has the odor of rotten eggs can produce irritation of the eyes and respiratory tract. At high concentrations (higher than is likely to be associated with asphalt) hydrogen sulfide gas can cause severe health effects and death.

Clay/Mineral Filler: Kaolin clay may contain small amounts (< 1.0%) of respirable crystalline quartz (silica). IARC considers crystalline silica to be a human carcinogen when the silica dust is inhaled. Inhaled crystalline silica can also produce a condition of the lungs known as silicosis. However, exposure to silica dust is not an exposure of concern when the kaolin clay is mixed in a wet solution with asphalt and water.

Acrylic Co-polymer: Although there are no toxicological data specific to this particular ingredient, the following summary information was found for similar mixtures.

Oral LD50 (rat): >5,000 mg/kg

Dermal LD50 (rabbit): >5,000 mg/kg

Skin Irritation (rabbit): Low degree of irritation

Eye Irritation (rabbit): Low degree of irritation

Styrene-butadiene Copolymer :

Eye Irritation (rabbit): Moderate degree of irritation

12.0 ECOLOGICAL INFORMATION

Some of the components of the asphalt mixture used in these emulsions are not readily biodegradable. Although there is no information to indicate that the components of this product bioaccumulate in the food chain, the heavier molecular weight hydrocarbon components of asphalt may be persistent in the environment. Release of this product into surface waters should be avoided. No specific ecological toxicity information was available for asphalt.

13.0 DISPOSAL CONSIDERATIONS

Dispose of contaminated or unused material in closed containers according to federal, state and local regulations.

14.0 TRANSPORT INFORMATION

DOT Description:

Proper Shipping Name:	Not regulated by DOT as a hazardous substance
Hazard Class:	None
UN Number:	None
NA Number:	None

15.0 REGULATORY INFORMATION

US Federal Regulations

OSHA Hazard Communication Standard (29 CFR 1910.1200):

This product is considered to be non-hazardous as defined in OSHA's Hazard Communication Standard.

EPA Toxic Substances Control Act, TSCA (40 CFR part 710):

All components of this product are in compliance with the inventory listing requirements of TSCA.

EPA SARA Title III (Superfund Amendments and Reauthorization Act) – Sections 302, 304, 311, 312, 313:

Section 302 – Extremely Hazardous Substances (40 CFR Part 355):

This product contains the following component(s) identified on Appendix A and B of the extremely hazardous substance list:

	Reportable	Threshold Planning
--Component--	--Quantity (Lbs.)--	--Quantity (Lbs.)--
NONE		

Section 304 – Emergency Release Notifications (40 CFR Part 355):

This product contains the following component(s) identified
 Either as an extremely hazardous substance (see Section 302) or a
 CERCLA Hazardous Substance (40 CFR 302) which in the case of
 a spill or release may be subject to the reporting requirements
 under Section 304 of Title III: NONE

Sections 311 and 312 – Material Safety Data Sheet (MSDS)
 Requirements (40 CFR Part 370):

This product is not a hazardous chemical under 29 CFR 1910.1200
 and therefore is not covered by Title III of SARA.

Section 313 – Toxic Chemical Release Reporting 940 CFR 372):

This material does not contain ingredients subject to Section 313 of
 SARA Title III.

<u>State Right-to Know Laws:</u>	<u>Components</u> <u>subject to reporting:</u> <u>CAS Number:</u>
<u>%Weight:</u>	
Connecticut	No component subject to reporting
Florida	No component subject to reporting
Illinois	No component subject to reporting
Louisiana	No component subject to reporting
Massachusetts	No component subject to reporting
New Jersey	No component subject to reporting
Pennsylvania	No component subject to reporting
 California Proposition 65	 The required chemical analyses and risk assessments were performed on this product. Results indicate that there are no significant risks (or observable effects), as defined by this statute, associated with this product under conditions of normal use.

16.0 OTHER INFORMATION

<u>NFPA Classification</u> <u>Rating</u>	<u>HMIS Classification</u>	<u>Hazard</u>
Health: 1	Health: 1	0 - Least
Fire: 1 *	Fire: 1 *	1 - Slight
Reactivity: 1	Reactivity: 1	2 - Moderate
Other: -	Personal Protection:**	3 - High
		4 - Extreme

Comments:

- * Cured product only.
- ** See Section 8 of this MSDS for guidance in selection of personal protective equipment.

The information contained in this MSDS is believed to be accurate as of the time that this document was prepared. All chemicals may present unknown health hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist. Final determination of suitability of the chemical(s) is the sole responsibility of the user. Users of any chemical should satisfy themselves that the conditions and methods of use assure that the chemical is used safely.

NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO THE INFORMATION CONTAINED HEREIN OR THE CHEMICAL TO WHICH THE INFORMATION REFERS.

