SAFETY DATA SHEET — 16 Sections

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identifier COLD PATCH CLASS 5			[WHMIS Classification]
Product Use Asphalt Patching			
Manufacturer's Name O & G Industries, Inc		Supplier's Name	
Street Address 112 Wall Street		Street Address	
City Torrington	Province CT	City	Province
Postal Code 06790	Emergency Telephone 203 – 215 – 2501	Postal Code	Emergency Telephone
Date MSDS Prepared	MSDS Prepared By	Phone Number	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients ***(specific)***	%	CAS Number	LD $_{50}$ of Ingredient ***(specify species and route)***	LC $_{50}$ of Ingredient ***(specify species)***
Petroleum Asphalt MC-250	<10	8052-42-4		
Aggregate (crushed stone and sand)	>90	Mixture		
Kerosene or Fuel Oil	1-4	8008-20-6		
Additives	<1	Mixture		
Crystalline Silica	>1	14808-60-7		
Polypropylene Fibers	<1			

SECTION 3 — HAZARDS IDENTIFICATION

Route of Entry ❒ Skin Contact X❒ Skin Absorption ❒ Eye Contact X❒ Inhalation ❒ Ingestion

[Emergency Overview]

[WHMIS Symbols]

Potential Health Effects: Health Hazards *(Acute and Chronic)* Existing abnormal conditions of the skin and/or respiratory system may be aggravated by exposure to cold asphalt paving materials.

Medical Conditions Generally Aggravated by Exposure: Existing abnormal conditions of the skin and/or respiratory system may be aggravated by exposure to cold asphalt paving materials.

SECTION 4 — FIRST AID MEASURES

Skin Contact Hot material – Remove contaminated clothing and immediately flush in cool water for at least 15 minutes. Apply iced water or cold packs to burned area if burn is less than 10% of the body surface. Do not attempt to remove material from a burn. Get prompt medical attention. Cold material – Clean exposed skin with oil-dissolving skin cleaner. Do not use solvents or thinners to remove material from skin.

Eye Contact – Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open, then get prompt medical attention. Beyond flushing, do not attempt to remove material from eyes.

Inhalation Remove to fresh air. Get immediate medical attention if breathing is difficult or if irritation persists.

Ingestion If material is swallowed, do not induce vomiting. Get immediate medical attention.

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SECTION 5 — FIRE FIGHTING MEASURES

Flammable X ❒ Yes ❒ No	**If yes, under which conditions?** The kerosene in this product is flammable.	
Means of Extinction Agents approved for Class B hazards (e.g., dry chemical, carbon dioxide, foam, steam), and water fog. Avoid using straight-stream water.		
Flashpoint (° C) and Method Kerosene: 100-180oF (TCC) Petroleum asphalt: 350oF (CCC)	**Upper Flammable Limit (% by volume)** 7.5%	**Lower Flammable Limit (% by volume)** 0.5%
Autoignition Temperature (°C)	Explosion Data — Sensitivity to Impact	Explosion Data — Sensitivity to Static Discharge
Hazardous Combustion Products - When heated above its flash point, kerosene may burn if an ignition source is provided. Petroleum asphalt fumes can explode when concentrated in an enclosed environment and supplied with an ignition source. Never use welding or cutting torch on or near containers (especially empty) because vapors can ignite explosively.		
[NFPA] N/A		

SECTION 6 — ACCIDENTAL RELEASE MEASURE

Leak and Spill Procedures Steps to Be Taken in Case Material is Released or Spilled: Keep all ignition sources at least 50 ft away. Avoid personal contact with heated material.

Prevent materials from entering streams, drainages, or sewers. Spills entering surface waters (or any other watercourse or sewers entering/ leading to surface waters) that cause a sheen must be reported to the National Response Center (800) 424-8802

Other Precautions Tripping accidents have occurred because of asphalt buildup on bottoms of shoes and boots. Materials should be removed regularly to prevent such accidents. Do not use solvents or thinners to clean footwear.

SECTION 7 — HANDLING AND STORAGE

Handling Procedures and Equipment

Precautions to Be taken in Handling and Storing. Store away from all ignition sources and open flames. In accordance with applicable laws and regulations, storage containers should be ventilated to reduce fire and explosion hazard and possible overexposure of personnel to fumes and vapors. Do not weld, heat, or drill container. Emptied container may contain hazardous material which may ignite explosively if heated. When petroleum asphalt products are heated, potentially irritating emissions (fumes, mists, vapors) are released. Respirable dust may be generated when hardened asphalt concrete is subject to mechanical forces, such as demolition work, surface treatment (sanding grooving, chiseling, etc.), and recycling of pavement.

Other Precautions. Tripping accidents have occurred because of asphalt buildup on bottoms of shoes and boots.
Materials should be removed regularly to prevent such accidents. Do not use solvents or thinners to clean footwear.

SECTION 8 — EXPOSURE CONTROL / PERSONAL PROTECTION

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Exposure Limits
X❒ ACGIH (Listed below)X ❒OSHA PEL
(listed below) ❒Other (specify)

Specific Engineering Controls *(such as ventilation, enclosed process)* Exposure limits:
Unless specified otherwise, limits are expressed as milligrams of substance per cubic meter of aid (mg/m3), 8- hour time-weighted average (TWA). Limits for cristobalite and tridymite (other forms of crystalline silica) are equal to one-half of the limits for quartz. Petroleum Asphalt Fumes? ACGIH TLV & MSHA & OSHA proposed PEL = 5
Respirable crystalline silica (quartz): ACGIH TLV, OSHA, PEL and MSHA - proposed PEL = 0.1
Respirable dust: MSHA = 10 (% Respirable quartz +2). Total Dust: MSHA = 30/(%quartz+3)
Limestone (calcium carbonate): ACGIH TLV and MSHA = 10 (total dust, not otherwise regulated; MSHA = 10 (Total "nuisance" dust); MSHA-proposed = 5 ("Respirable mine dust").

Effects described in this section are believed not to occur if exposures are maintained at or below appropriate TLVs. Because of the wide variation in individual susceptibility, these exposure limits may not be applicable to all persons and those with medical conditions listed below.

Respiratory Protection *(Specify Type)* Not required under normal use and working conditions. For air applicable exposure limits, use a NIOSH-MSHA approved contaminant specific, air purifying respirator. If such concentrations are sufficiently high that air purifying respirator is inadequate, or if oxygen adequate to sustain life is not present, use a positive pressure self-contained breathing apparatus. Follow all applicable respirator use standards and regulations.

Ventilation	Local Exhaust	Special
	X	General Dilution
	Mechanical (General)	

Protective Gloves	**Eye Protection Minimum protection**
Wear impervious gloves	Safety glasses with side shields. Chemical safety goggles to prevent eye contact with material.

Other Protective Clothing or Equipment

Wear protective clothing to avoid contact with skin.

Work/Hygienic Practices It is recommended that workers wash their hands before eating, drinking, smoking and using toilet facilities. Laundering clothing between uses is recommended. Clean skin with soap and water, or an oil dissolving skin cleaner. Do not use solvents or thinners to remove material from skin.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Physical State Solid	**Odor and Appearance** Petroleum odor Black, viscous and granular	**Odor Threshold (ppm)** **N/A**
Specific Gravity's 2 – 2.6	**Vapor Density (air = 1)** <1	**Vapor Pressure (mmHg)** Unknown
Evaporation Rate Unknown	**Boiling Point (° C)** **Kerosene Petroleum Asphalt** 304o-574oF >900oF	**Freezing Point (° C)** Unknown
pH Unknown	**Coefficient of Water/Oil Distribution**	**[Solubility in Water]** Negligible

SECTION 10 — STABILITY AND REACTIVITY

Chemical Stability **X❒ Yes ❒ No**	**If no, under which conditions?**
Incompatibility with Other Substances **X❒ Yes❒ No**	**If yes, which ones?** Contact with Fluorine may cause burning or explosion.

Reactivity, and under what conditions?
Strong oxidizers my react with kerosene.

Hazardous Decomposition Products: Carbon Monoxide and other components (such as amines, nitrogen dioxide, sulfur dioxide, ozone, hydrogen sulfide, and various hydrocarbons) may be release by thermal decomposition. Hazardous vapors may collect in enclosed vessels or areas if not properly ventilated.

SECTION 11 — TOXICOLOGICAL INFORMATION

Effects of Acute Exposure

[*Optional, not required under WHMIS]*

The major hazard associated with this product is the potential for fire when the product is heated above the flash point of kerosene. This product may be hot and may cause thermal burns. Emissions (fumes, mists, vapors) from the heated product may cause irritation of the skin, and respiratory tract. Directs contact of product with eyes and skin should be avoided.
EYES: Direct contact with heated materials can cause thermal burns. Emissions can cause irritation.
SKIN: Direct contact with heated materials can cause thermal burns. Contact with kerosene may defeat the skin which may lead to irritation, infection and dermatitis. There may be an increased sensitivity to sunburn when the skin is exposed to petroleum asphalt emissions.
INHALATION: Emission from heated material may have an unpleasant odor, and may produce nausea and irritation of the upper respiratory tract.
INGESTION: Direct contact with heated material can produce thermal burns. Petroleum asphalt has a low toxicity when ingested. However kerosene is rapidly absorbed from the gastrointestinal tract, with possible systematic effects (gastrointestinal irritation, vomiting, diarrhea, and CNS depression) and possible aspiration into the lungs. Aspiration of kerosene has caused pulmonary edema and chemical pneumonitis.

Effects of chronic exposure

Petroleum-derived asphalt products, such as cold asphalt paving material, should not be confused with “tar” products, which are produced from the destructive distillation of coal. The hydrocarbons in petroleum asphalt are a complex mixture of paraffinic, naphthenic, and aromatic hydrocarbons, including polycyclic aromatic compounds. Some of these polycyclics may be those which have been shown to induce skin cancer in animals under laboratory conditions (mouse skin paining tests). Although epidemiologic studies on some petroleum products containing polycyclic aromatics suggest the possibility of skin cancer induction in man after prolonged and repeated contact, there have been no studies linking exposure to petroleum asphalt with human cancer. Chronic exposure to petroleum asphalt has caused skin disorders such as dermatitis, follicitis, or oil acne. There may be an ncreased sensitivity to sunburn when the skin is exposed to petroleum asphalt emissions (fumes, mists, vapors).

Irritancy of Product

Skin sensitization See Above	**Respiratory sensitization See Above**
Carcinogenicity-IARC	**Carcinogenicity - ACGIH**
Reproductive toxicity N/A	**Teratogenicity N/A**
Embrotoxicity N/A	**Mutagenicity N/A**

Name of synergistic products/effects N/A

SECTION 12 — ECOLOGICAL INFORMATION

[Aquatic Toxicity] N/A

SECTION 13 — DISPOSAL CONSIDERATIONS

Waste Disposal

Avoid contact with heated material. Contact asphalt plant to determine the feasibility of recycling material. Waste should be disposed of according to all applicable Federal, state and local regulations. None of the components of this product are subject to the reporting requirements of Title III of SARA 1986 and 40CFR 372.

SECTION 14 — TRANSPORT INFORMATION

Special Shipping Information	No placard required.		
			PIN
TDG	N/A	[DOT]	None
[IMO]	N/A	[ICAO]	N/A

SECTION 15 — REGULATORY INFORMATION

[WHMIS Classification]	[OSHA] Label according to the OSHA Hazard Communication standard (29 CFR 1910.1200(f)) and applicable state and local laws and regulations.
[SERA] N/A	[TSCA] N/A

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by CPR.

SECTION 16 — OTHER INFORMATION

Contact the O&G Safety Department with any questions

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