

# Asphalt Cements - Performance Graded (PG)

## SECTION 1. IDENTIFICATION

<b>Product Identifier</b>	Asphalt Cements - Performance Graded (PG)
<b>Other Means of Identification</b>	PG 46-34, PG 46-37, PG 46-40, PG 52-28, PG 52-34, PG 52-40, PG 58-22, PG 58-28, PG 58-31, PG 58-34, PG 58-37, PG 58-40, PG 64-22, PG 64-28, PG 64-34, PG 64-37, PG 70-22, PG 70-28, PG 70-31, PG 70-37, PG 76-22, PG 76-28, PG 76-34, 82-28; (E)(V)(H)(S), (P)(R)(X)(J)(T)(HRD)(Foam)
<b>Other Identification</b>	Suffix (AS) indicates anti-strip agent added; Suffix (EVO) (WMA) indicates warm mix agent added
<b>Recommended Use</b>	These products are primarily used for paving applications. However, there are a number of other industrial applications.
<b>Restrictions on Use</b>	None known.
<b>Manufacturer/Supplier Identifier</b>	McAsphalt Industries Ltd, 8800 Sheppard Ave East, Toronto, Ontario, M1B 5R4
<b>Emergency Phone No.</b>	CANUTEC, (613) 996 - 6666, 24 hours McAsphalt Industries Ltd., 1 - (800) - 268 - 4238, 8AM-5PM Monday to Friday

## SECTION 2. HAZARD IDENTIFICATION

Classified according to Canada's Hazardous Products Regulations (WHMIS 2015).

### Classification

Acute toxicity (Inhalation) - Category 4; Skin irritation - Category 3; Eye irritation - Category 2B; Carcinogenicity - Category 2

### Label Elements



### Warning

Harmful if swallowed, in contact with skin or if inhaled.  
Avoid breathing dust/fume/gas/mist/vapours/spray.  
If skin irritation occurs: Get medical advice/attention.  
If eye irritation persists: Get medical advice/attention.

### Other Hazards

Dark Black, Semi-solid with characteristic asphaltic odour or "rotten egg" odour if H<sub>2</sub>S present, but odour is an unreliable warning, since it may deaden the sense of smell.  
Can cause thermal burns, exposures require specialized first-aid and medical follow-up.  
Prolonged or repeated skin contact can cause drying of the skin which may produce irritation or dermatitis.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	%	Other Identifiers	Other Names
Asphalt (Bitumen) fume	8052-42-4	88 - 100		Asphalt

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SULFUR	7704-34-9	0 - 1		
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**Notes**

Antistripping additive added in quantities < 1% when indicated. Heated product may evolve vapours irritating to the nose, throat and lungs. See section 8 for further information.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section. During storage or transit of hot asphalt, hydrogen sulphide may be generated.

**SECTION 4. FIRST-AID MEASURES**

**First-aid Measures**

**Inhalation**

Move to fresh air. If breathing is difficult, trained personnel should administer emergency oxygen if advised to do so by Poison Centre or doctor. Loosen tight clothing such as collar, tie, belt or waist band. Get medical attention immediately.

**Skin Contact**

For hot asphalt splash, cool affected body part with water immersion or shower. Do not attempt removal of asphalt but split longitudinally if circumferential to avoid tourniquet effect. No attempt should be made to remove firmly adhering bitumen from the skin. Once the bitumen has cooled, it will do no further harm and in fact provide a sterile covering over a burnt area. As healing takes place, the bitumen plaque, the bitumen plaque will detach itself, usually after a few days. For skin soiling without underlying burn, cleanse with mineral oil followed by soap and water. Use olive oil in vicinity of eyes.

**Eye Contact**

If a contact lens is present, DO NOT delay flushing or attempt to remove the lens. Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for at least 30 minutes, while holding the eyelid(s) open.

**Ingestion**

Rinse mouth with water. Never give anything by mouth if person is rapidly losing consciousness, or is unconscious or convulsing. Do not induce vomiting.

**First-aid Comments**

If exposed or concerned, get medical advice or attention. Some of the first-aid procedures recommended here require advanced first-aid training.

**Most Important Symptoms and Effects, Acute and Delayed**

Inhalation of this product may cause respiratory tract irritation and Central Nervous System (CNS) Depression, symptoms of which may include weakness, dizziness, slurred speech, drowsiness, unconsciousness and in cases of severe over exposure; coma and death. At higher concentrations (above 10 ppm), hydrogen sulphide is extremely toxic by inhalation, may cause respiratory-tract irritation and respiratory failure, coma and death. Pulmonary edema can occur up to 24 hours after hydrogen sulphide exposure. While hydrogen sulphide emits a strong odour of rotten eggs, detection by smell is not sufficient as a warning property for exposure to this substance, as it may deaden the sense of smell quickly.

If on skin: repeated or prolonged exposure can irritate the skin.

Can cause thermal burns.

If in eyes: may cause mild irritation. Symptoms include sore, red eyes, and tearing.

**Immediate Medical Attention and Special Treatment**

**Special Instructions**

No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

**Medical Conditions Aggravated by Exposure**

Repeated or prolonged contact with spray or mist may produce chronic eye irritation and severe skin irritation. Repeated skin exposure can produce local skin destruction or dermatitis see toxicological information (Section 11).

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## SECTION 5. FIRE-FIGHTING MEASURES

### Extinguishing Media

#### Suitable Extinguishing Media

Not combustible. Use extinguishing agents compatible with product and suitable for surrounding fire.

#### Unsuitable Extinguishing Media

Do not spray water onto tank, vessel containing liquid asphalt as water reacts violently with product at elevated temperatures; risk of steam explosion!

### Specific Hazards Arising from the Product

Flammability of the product: Will burn on prolonged exposure to flame or high temperature.

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Low fire hazard. This material must be heated before ignition will occur. Hydrogen sulphide may be released if the product is overheated and may accumulate in the tank headspace or any other confined space.

Carbon oxides (CO, CO<sub>2</sub>), smoke and irritating vapours as products of incomplete combustion.

### Special Protective Equipment and Precautions for Fire-fighters

Fire-fighters should enter area wearing specialized protective equipment. (Bunker Gear will not provide adequate protection.) chemical protective clothing (e.g. chemical splash suit) and positive pressure SCBA may be necessary.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

### Personal Precautions, Protective Equipment, and Emergency Procedures

No action shall be taken involving any personal risk or without suitable training. Evacuate the area immediately. Isolate the hazard area. Keep out unnecessary and unprotected personnel. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

### Environmental Precautions

Do not allow into any sewer, on the ground or into any waterway. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### Methods and Materials for Containment and Cleaning Up

Small spills or leaks: stop or reduce leak if safe to do so. Ventilate the area to prevent the gas from accumulating, especially in confined spaces. Contain and soak up spill with absorbent that does not react with spilled product. Do not use absorbents. Contain spill using noncombustible material such as vermiculite, earth or sand. Do NOT use combustible materials such as sawdust. Cover the spill surface with the appropriate type of foam to reduce the release of vapour. Large spills or leaks: dike spilled product to prevent runoff. Do not direct water at spill or source. Dike and recover contaminated water for appropriate disposal. Let product solidify. Do not return spilled product to its original container. Review Section 13 (Disposal Considerations) of this safety data sheet. Contact emergency services and manufacturer/supplier for advice.

## SECTION 7. HANDLING AND STORAGE

### Precautions for Safe Handling

During storage, transit and cooling of asphalt, solvent vapour and hydrogen sulphide may accumulate in enclosed spaces such as tank cars. Open tank car hatches with caution. Maintain same precautions when gauging and sampling. Do not cut or weld near full/empty containers. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not ingest. Avoid contact with eyes, skin and clothing. Store and use away from heat, sparks, open flames or any other ignition source. Use explosion-proof electrical (ventilating, lighting, and material handling) equipment. Use non-sparking tools. Avoid breathing vapour or mist. Use only with adequate ventilation. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material. Bond and ground containers during product transfer to reduce the possibility of static-initiated fire or explosion. Use only indirectly heated oil-jacketed equipment. This product is non-combustible. If heated, irritating vapours may be formed. Do not use in

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areas without adequate ventilation. Wash hands thoroughly after handling.

### Conditions for Safe Storage

Store in an area that is: temperature-controlled, dry, an approved, fire-resistant area, secure and separate from work areas. Engineering controls are usually required in the storage area to protect against the product's hazard(s). Review Section 8 (Exposure Controls/Personal Protection) for information. Avoid bulk storage indoors. Protect product from contact with water, including humidity. Prevent rainwater and ground water from reaching storage area.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control Parameters

Chemical Name	ACGIH TLV®		OSHA PEL		AIHA WEEL	
	TWA	STEL	TWA	Ceiling	8-hr TWA	TWA
Asphalt (Bitumen) fume	0.5 mg/m <sup>3</sup> (l) A4 BEI		Not established			
SULFUR	1 ppm	5 ppm				

ACGIH® = American Conference of Governmental Industrial Hygienists. TLV® = Threshold Limit Value. TWA = Time-Weighted Average. STEL = Short-term Exposure Limit.

### Appropriate Engineering Controls

General ventilation is usually adequate. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

### Individual Protection Measures

#### Eye/Face Protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

#### Skin Protection

Wear chemical protective clothing e.g. gloves, aprons, boots. In case of an emergency (e.g. an uncontrolled release): wear heat resistant, impervious gloves i.e., leather or aluminize.

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

#### Respiratory Protection

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: organic vapour filter cartridge or canister with a dust, fume or mist filter (R, or P series) may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air-purifying respirators is limited.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

### Basic Physical and Chemical Properties

Appearance	Dark black Semi-solid.
Odour	Characteristic asphaltic odour or "rotten egg" odour if H <sub>2</sub> S present, but odour is an unreliable warning, since it may deaden the sense of smell.
Odour Threshold	Not available
pH	Not available
Melting Point/Freezing Point	Not available (melting); Not available (freezing)
Initial Boiling Point/Range	Not available
Flash Point	> 290 °C (554 °F) (open cup)
Evaporation Rate	Not available
Flammability (solid, gas)	Not applicable

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<b>Upper/Lower Flammability or Explosive Limit</b>	Not available (upper); Not available (lower)
<b>Vapour Pressure</b>	Not available
<b>Vapour Density (air = 1)</b>	Not available
<b>Relative Density (water = 1)</b>	Not available
<b>Solubility</b>	Insoluble in water; Soluble in all proportions in common organic solvents.
<b>Partition Coefficient, n-Octanol/Water (Log Kow)</b>	Not available
<b>Auto-ignition Temperature</b>	Not available
<b>Decomposition Temperature</b>	Not available
<b>Viscosity</b>	Not available (kinematic)
<b>Other Information</b>	
<b>Physical State</b>	Liquid
<b>Bulk Density</b>	Not available

## SECTION 10. STABILITY AND REACTIVITY

### Reactivity

Not reactive under normal conditions of use.

### Chemical Stability

Stable under normal storage conditions.

### Possibility of Hazardous Reactions

Contact between heated Asphalt and water can cause a violent eruption.

### Conditions to Avoid

Under normal conditions of storage and use, hazardous polymerisation will not occur.

### Incompatible Materials

Reactive with oxidising agents.

### Hazardous Decomposition Products

May release CO<sub>x</sub>, NO<sub>x</sub>, SO<sub>x</sub>, PO<sub>x</sub>, H<sub>2</sub>S, hydrocarbons, smoke and irritating vapours when heated to decomposition.

## SECTION 11. TOXICOLOGICAL INFORMATION

### Likely Routes of Exposure

See toxicological information (Section 11).

### Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Asphalt (Bitumen) fume		> 5000 mg/kg (rat)	> 2000 mg/kg (rabbit)
SULFUR	~ 444 ppm (rat) (4-hour exposure) (gas)		

### Skin Corrosion/Irritation

Irritating to skin. Signs/symptoms may include localized redness, swelling, and itching. Hot liquid product may cause serious thermal burns on direct contact. Asphalt fumes can increase susceptibility to sunburn.

Slightly irritating to the skin. Contact with hot material can cause thermal burns.

### Serious Eye Damage/Irritation

Irritating to eyes. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision. Hot liquid product may cause serious thermal burns on direct contact. Hydrogen sulphide may cause eye irritation at 1 - 20 ppm and acute conjunctivitis at higher concentrations. Above 50 ppm H<sub>2</sub>S, eye irritation may include symptoms of redness, sever swelling, tearing, sensitivity to light and the appearance of 'Halos' around lights.

Slightly irritating to the eyes.

### STOT (Specific Target Organ Toxicity) - Single Exposure

#### Inhalation

At high concentrations may cause irritation to the respiratory system. Unconsciousness and or death at low concentrations nose and throat irritation.

Inhalation of this product may cause respiratory tract irritation and Central Nervous System (CNS) Depression, symptoms of which may include weakness, dizziness, slurred speech, drowsiness, unconsciousness and in cases of severe overexposure; coma and death. At higher concentrations (above 10 ppm), hydrogen sulphide is extremely toxic by inhalation, may cause respiratory-tract irritation and respiratory failure, coma and death. Pulmonary edema can occur up to 24 hours after hydrogen sulphide exposure. While hydrogen sulphide emits a strong odour of rotten eggs, detection by smell is not sufficient as a warning property for exposure to this substance, as it may deaden the sense of smell quickly.

#### Skin Absorption

May cause thermal burns from heat skin to darken.

#### Ingestion

May cause severe irritation or burns to the mouth, throat and stomach.

No known significant effects or critical hazards.

### Aspiration Hazard

Not known to be an aspiration hazard.

### STOT (Specific Target Organ Toxicity) - Repeated Exposure

Effects similar to STOT (Specific Target Organ Toxicity) - Single Exposure, as described above.

No known significant effects or critical hazards.

### Respiratory and/or Skin Sensitization

Skin irritation, the symptoms may include redness and itching and swelling it may irritate the respiratory system.

### Carcinogenicity

Chemical Name	IARC	ACGIH®	NTP	OSHA
Asphalt (Bitumen) fume	Group 2B	A4		

IARC: 8052-42-4 Group 2B - Possibly carcinogenic to humans. Occupational exposure to hard bitumens and their emissions during mastic asphalt work 8052-42-4 Group 2B - Possibly carcinogenic to humans. Occupational exposure to straight-run bitumens and their fume condensate during road paving.

An IARC working group has concluded that occupational exposures to straight-run bitumens and their emissions during road paving are 'possibly carcinogenic to humans' (Group 2B).

### Reproductive Toxicity

#### Development of Offspring

Not available.

No known significant effects or critical hazards.

#### Sexual Function and Fertility

Not available.

No known significant effects or critical hazards.

#### Effects on or via Lactation

Not known to cause effects on or via lactation.

### Germ Cell Mutagenicity

Not available.

No known significant effects or critical hazards.

No information was located for: STOT (Specific Target Organ Toxicity) - Single Exposure, Interactive Effects

## SECTION 12. ECOLOGICAL INFORMATION

Environmental affects: No known significant effects or critical hazards. Keep out of sewers, drainage areas and waterways. Report spills and releases, as applicable under Federal and Provincial regulations. The information given is

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based on data available for the material, the components of the material, and similar materials.

#### **Ecotoxicity**

Studies were not located.

#### **Persistence and Degradability**

Not available.

#### **Bioaccumulative Potential**

No information was located.

#### **Mobility in Soil**

Studies are not available.

#### **Other Adverse Effects**

There is no information available.

## **SECTION 13. DISPOSAL CONSIDERATIONS**

### **Disposal Methods**

Contact local environmental authorities for approved disposal or recycling methods in your jurisdiction. Recycle and reuse product, if possible. The required hazard evaluation of the waste and compliance with the applicable hazardous waste laws are the responsibility of the user. Treat waste in an approved waste disposal facility. Do not reuse empty containers. Dispose of or recycle empty containers through an approved waste management facility.

## **SECTION 14. TRANSPORT INFORMATION**

Not regulated under Canadian TDG regulations.

<b>Regulation</b>	<b>UN No.</b>	<b>Proper Shipping Name</b>	<b>Transport Hazard Class(es)</b>	<b>Packing Group</b>
US DOT	3257	Performance Graded Liquid Asphalt (Elevated Temperature Liquid, n.o.s., at or above 100 c and below its flash point)	9	III

**Special Precautions** Please note: For US Shipments Only: ELEVATED TEMPERATURE LIQUID, N.O.S., at or above 100 c and below its flash point, 9, UN3257, PGIII

### **Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable

## **SECTION 15. REGULATORY INFORMATION**

### **Safety, Health and Environmental Regulations**

#### **Canada**

#### **Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)**

All ingredients are listed on the DSL or are not required to be listed.

#### **USA**

#### **Toxic Substances Control Act (TSCA) Section 8(b)**

All ingredients are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.

#### **Europe inventory**

Not determined

## **SECTION 16. OTHER INFORMATION**

<b>NFPA Rating</b>	<b>Health - Not assigned. Flammability - 1</b>	<b>Instability - 0</b>
<b>SDS Prepared By</b>	EPC & Risk Management Department	
<b>Phone No.</b>	1 (416) 281 - 8181	

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**Revision Indicators** April 12 2018 Other Means of Identification adjusted to meet new Provincial nomenclature requirements  
April 26 2018 PG 82-28 added to Other Means of Identification  
**Key to Abbreviations** ACGIH® = American Conference of Governmental Industrial Hygienists  
AIHA® = AIHA® Guideline Foundation HSDB® = Hazardous Substances Data Bank  
IARC = International Agency for Research on Cancer  
NFPA = National Fire Protection Association NIOSH = National Institute for Occupational Safety and Health  
OSHA = US Occupational Safety and Health Administration  
RTECS® = Registry of Toxic Effects of Chemical Substances  
**References** CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS).  
HSDB® database. US National Library of Medicine. Available from Canadian Centre for Occupational Health and Safety (CCOHS). NIOSH Pocket Guide database. National Institute for Occupational Safety and Health. Available from Canadian Centre for Occupational Health and Safety (CCOHS). Registry of Toxic Effects of Chemical Substances (RTECS®) database. Dassault Systèmes/BIOVIA ("BIOVIA"). Available from Canadian Centre for Occupational Health and Safety (CCOHS).  
**Disclaimer** To the best of our knowledge, the information herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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