

Section 1: IDENTIFICATION

Product Name: Asphalt Cements - Modified (contains 0 - 0.5% Arkema (Ar-Mazz) - Road Science AD-here LOF 65-00)

Synonyms: PG 46-40; PG 52-28; PG 52-34; PG 52-40; PG 58-28; PG 58-34; PG 64-22; PG 64-28; PG 64-34; PG 70-22; PG 70-28; PG 76-22; PG 76-28; PG 82-22; PG58H-28; PG58V-28; PG58E-28.

Product Use: Paving applications and miscellaneous industrial applications.

Restrictions on Use: Not available.

Manufacturer/Supplier: General Liquids Canada Ltd.
1233 Rocky Lake Drive
Waverley, Nova Scotia, Canada
B2R 1S1

Phone Number: 8-5 (M-F, AST): (902) 835-3311

Emergency Phone: 24 hr. contact #: (902) 240-3763
CANTEC: 1-888-CAN-UTEC (226-8832), 613-996-6666 or *666 on a cellular phone

Date of Preparation of SDS: April 29, 2020

Section 2: HAZARD(S) IDENTIFICATION
GHS INFORMATION

Classification: Sensitization - Skin, Category 1A
Carcinogenicity, Category 2

LABEL ELEMENTS

Hazard

Pictogram(s):



Signal Word: Warning

Hazard Statements: May cause an allergic skin reaction.
Suspected of causing cancer.

Precautionary Statements

Prevention: Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Avoid breathing mist, vapours, or spray.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves, protective clothing, eye protection and face protection.

Response: IF ON SKIN: Wash with plenty of water.
IF exposed or concerned: Get medical attention.
If skin irritation or rash occurs: Get medical attention.
Take off contaminated clothing and wash it before reuse.

Storage: Store locked up.

Disposal: Dispose of contents and container in accordance with applicable regional, national and local laws and regulations.

Other Hazards Known to the Supplier With Respect to the Hazardous Product: When heated, this material may evolve toxic and flammable **Hydrogen sulphide**. Hydrogen sulphide may accumulate in confined spaces. Inhalation of Hydrogen sulphide may cause loss of sense of smell, major irritation of the respiratory tract, headache, nausea, vomiting, dizziness, and fluid buildup in the lungs (pulmonary edema), which can be fatal. At 300 ppm unconsciousness may occur after 20 minutes. From 300 to 500 ppm, death can occur within minutes of continuous exposure. Above 500 ppm Hydrogen sulphide may cause instantaneous loss of consciousness and immediate death.

Ingredients with Unknown Toxicity: 100% of this product mixture consists of ingredient(s) of unknown acute toxicity.

This material is considered hazardous by the OSHA Hazard Communication Standard, (29 CFR 1910.1200).

This material is considered hazardous by the Hazardous Products Regulations.

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS
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Hazardous Ingredient(s)	Common name / Synonyms	CAS No.	% wt./wt.
Asphalt	Not available.	8052-42-4	80 - 100
Benzene, ethenyl-, polymer with 1,3-butadiene	Not available.	9003-55-8	0 - 10
1,2-Ethanediol	Ethylene glycol	107-21-1	1 - 1.5
Polycyclic Aromatic Hydrocarbons	Not available.	130498-29-2	0 - 1

Contains Arkema (Ar-Mazz) - Road Science AD-here® LOF 65-00 at 0 - 0.5% wt/wt.:

Hazardous Ingredient(s)	Common name / Synonyms	CAS No.	% wt./wt. (final)
Fatty amidoamine *	Not available.	Proprietary	0 - 0.5

* See Section 16 for the supplier's Canadian HMIRA trade secret registry number.

Section 4: FIRST-AID MEASURES

Inhalation: If inhaled: Call a poison center or doctor if you feel unwell.
Acute and delayed symptoms and effects: May cause respiratory irritation. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Eye Contact: If in eyes: Rinse cautiously with water for at least 30 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor.
Acute and delayed symptoms and effects: May cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision. Hot liquid product may cause serious thermal burns on direct contact.

SAFETY DATA SHEET

Skin Contact: If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Get immediate medical advice/attention. If skin irritation or rash occurs: Get medical advice/attention. Remove non-adhering contaminated clothing. Cool adherent materials and burned areas with ice and/or cold water. Do not remove adherent material or clothing. Do not use solvents to remove asphalt from the skin. Wash contaminated clothing before reuse.

Acute and delayed symptoms and effects: May cause an allergic skin reaction. May cause skin irritation. 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.

Ingestion: If swallowed: Rinse mouth. Immediately call a poison center or doctor. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

Acute and delayed symptoms and effects: Hot product may cause thermal burns. Signs/symptoms may include severe mouth, throat and abdominal pain, nausea, vomiting, and diarrhea, blood in the feces and/or vomitus may also be seen. If swallowed in large quantities, Asphalt can obstruct the intestine.

General Advice: In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

Note to Physicians: Symptoms may not appear immediately. For inhalation of Hydrogen Sulphide, consider oxygen.

Section 5: FIRE-FIGHTING MEASURES

FLAMMABILITY AND EXPLOSION INFORMATION

Material will burn if involved in a fire. When heated, this material may evolve toxic and flammable Hydrogen sulphide.

Sensitivity to Mechanical Impact: This material is not sensitive to mechanical impact.

Sensitivity to Static Discharge: This material is sensitive to static discharge at temperatures at or above the flash point.

MEANS OF EXTINCTION

Suitable Extinguishing Media: Small Fire: Dry chemical, CO₂, water spray or regular foam.

Large Fire: Water spray, fog or regular foam. Move containers from fire area if you can do it without risk.

Unsuitable Extinguishing Media: Do not spray water onto burning product as this may cause spattering and spreading of the flame.

Products of Combustion: Oxides of carbon. Oxides of sulphur. Oxides of nitrogen. Hydrogen sulphide.

Protection of Firefighters: Fire may produce irritating, corrosive and/or toxic gases. Runoff from fire control or dilution water may cause pollution. Hydrogen sulphide is heavier than air and may collect in low lying areas and confined spaces. Wear positive pressure self-

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contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection.

Section 6: ACCIDENTAL RELEASE MEASURES

Emergency Procedures:	Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
Personal Precautions:	Do not touch or walk through spilled material. Use personal protection recommended in Section 8.
Environmental Precautions:	Keep out of drains, sewers, ditches, and waterways.
Methods for Containment:	Stop leak if without risk. Contain hot liquid by dyking and allow to cool and solidify. Do not flush to sewer or allow to enter waterways.
Methods for Clean-Up:	Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.
Other Information:	See Section 13 for disposal considerations.

Section 7: HANDLING AND STORAGE
Handling:

Do not swallow. Avoid breathing mist, vapours, or spray. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Grounding of containers/pouring equipment is necessary when transferring hot liquid product. See Section 8 for information on Personal Protective Equipment.

Storage:

Store locked up. Store away from incompatible materials. See Section 10 for information on Incompatible Materials. Keep out of the reach of children. Asphalt contains trace amounts of Hydrogen sulfide which can accumulate in vapour space of tanks and containers. Structural materials and lighting and ventilation systems should be corrosion resistant.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION
Exposure Guidelines
Component

Asphalt [CAS No. 8052-42-4]

ACGIH: 0.5 mg/m³ (TWA); A4; BEI; Inhalable fraction; For Asphalt (Bitumen) fume, as benzene-soluble aerosol

OSHA: No PEL established.

Benzene, ethenyl-, polymer with 1,3-butadiene [CAS No. 9003-55-8]

ACGIH: No TLV established.

OSHA: No PEL established.

Ethylene glycol [CAS No. 107-21-1]

ACGIH: 100 mg/m³ (C); A4; Aerosol only (1992)

OSHA: 50 ppm (C) [Vacated];

Polycyclic Aromatic Hydrocarbons [CAS No. 130498-29-2]

ACGIH: A2; BEI; Exposure by all routes should be carefully controlled to levels as low as possible (1990); For Benz[a]anthracene

OSHA: 0.2 mg/m³ (TWA); For benzene-soluble fraction.

Fatty amidoamine [CAS No. Proprietary]

ACGIH: No TLV established.

OSHA: No PEL established.

PEL: Permissible Exposure Limit

TLV: Threshold Limit Value

TWA: Time-Weighted Average

C: Ceiling

Engineering Controls:

Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapour, gas, etc.) below recommended exposure limits.

PERSONAL PROTECTIVE EQUIPMENT (PPE)



Eye/Face Protection:

Wear chemical safety goggles. If product is hot, wear full face-shield. Ensure that eyewash stations are close to the workstation location. Use equipment for eye protection that meets the standards referenced by CSA Standard CAN/CSA-Z94.3-92 and OSHA regulations in 29 CFR 1910.133 for Personal Protective Equipment.

Hand Protection:

Wear protective gloves. If product is hot, thermally protective gloves are recommended. Consult manufacturer specifications for further information.

Skin and Body Protection:

Wear protective clothing. Clothing with full length sleeves and pants should be worn.

Respiratory Protection:

If engineering controls and ventilation are not sufficient to control exposure to below the allowable limits then an appropriate NIOSH/MSHA approved air-purifying respirator that meets the requirements of CSA Standard CAN/CSA-Z94.4-11, or self-contained breathing apparatus must be used. Supplied air breathing apparatus must be used when oxygen concentrations are low or if airborne concentrations exceed the limits of the air-purifying respirators.

General Hygiene Considerations:

Handle according to established industrial hygiene and safety practices. Consult a competent industrial hygienist to determine hazard potential and/or the PPE manufacturers to ensure adequate protection.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Black or dark brown solid or semi-solid.
Colour:	Black or dark brown.
Odour:	Slight petroleum odour.
Odour Threshold:	Not available.
Physical State:	Solid or semi-solid at ambient temperatures. Liquid at elevated temperatures.
pH:	Not available.
Melting Point / Freezing Point:	Not available.
Initial Boiling Point:	> 400 °C (752 °F)
Boiling Range:	Not available.
Flash Point:	> 230 °C (446 °F) (COC)
Evaporation Rate:	Not available.
Flammability (solid, gas):	Not applicable.
Lower Flammability Limit:	Not available.
Upper Flammability Limit:	Not available.
Vapor Pressure:	< 1 mmHg at 20 °C (68 °F)
Vapor Density:	Not available.
Relative Density:	0.95 to 1.13 (Water = 1)
Solubilities:	Insoluble in water.
Partition Coefficient: n-Octanol/Water:	Not available.
Auto-ignition Temperature:	> 370 °C (698 °F)
Decomposition Temperature:	Not available.
Viscosity:	139 to 3000 cP at 135 °C (275 °F)
Percent Volatile, wt. %:	Not available.
VOC content, wt. %:	Not available.
Density:	Not available.
Coefficient of Water/Oil Distribution:	Not available.

Section 10: STABILITY AND REACTIVITY

Reactivity:	Contact with incompatible materials. Sources of ignition.
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: Contact with incompatible materials. Sources of ignition.

Incompatible Materials: Acids. Bases. Oxidizers.

Hazardous Decomposition Products: Hydrogen sulphide. Hazardous sulphur dioxide, and related oxides of sulphur may be generated upon combustion.

Section 11: TOXICOLOGICAL INFORMATION
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EFFECTS OF ACUTE EXPOSURE
Product Toxicity

Oral: Not available.

Dermal: Not available.

Inhalation: Not available.

Component Toxicity

Component	CAS No.	LD ₅₀ oral	LD ₅₀ dermal	LC ₅₀
Asphalt	8052-42-4	Not available.	Not available.	Not available.
Benzene, ethenyl-, polymer with 1,3-butadiene	9003-55-8	Not available.	Not available.	Not available.
Ethylene glycol	107-21-1	4700 mg/kg (rat)	9.53 mL/kg (rabbit)	Not available.
Polycyclic Aromatic Hydrocarbons	130498-29-2	Not available.	Not available.	Not available.
Fatty amidoamine	Proprietary	Not available.	Not available.	Not available.

Likely Routes of Exposure: Eye contact. Skin contact. Inhalation. Ingestion. Skin absorption.

Target Organs: Skin. Eyes. Gastrointestinal tract. Respiratory system. Lungs. Blood. Cardiovascular system. Bone marrow. Liver. Central nervous system.

Symptoms (including delayed and immediate effects)

Inhalation: May cause respiratory irritation. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Eye: May cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision. Hot liquid product may cause serious thermal burns on direct contact.

Skin: May cause an allergic skin reaction. May cause skin irritation. 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.

Ingestion: Hot product may cause thermal burns. Causes burns to nose, mouth, throat, and digestive tract. Signs/symptoms may include severe mouth, throat and abdominal pain, nausea, vomiting, and diarrhea, blood in the feces and/or vomitus may also be seen. If swallowed in large quantities, Asphalt can obstruct the intestine.

SAFETY DATA SHEET
Skin Sensitization: Not available.

Respiratory Sensitization: Not available.

Medical Conditions Aggravated By Exposure: Not available.

EFFECTS OF CHRONIC EXPOSURE (from short and long-term exposure)
Target Organs: Skin. Eyes. Gastrointestinal tract. Respiratory system. Lungs. Blood. Cardiovascular system. Bone marrow. Liver. Kidneys. Central nervous system.

Chronic Effects: Prolonged or repeated contact may dry skin and cause irritation. Repeated small exposures to Ethylene glycol by any route can cause severe kidney problems. Brain damage may also occur. Skin allergy can develop. This product contains Polycyclic Aromatic Hydrocarbons. Prolonged contact with these compounds has been associated with the induction of skin and lung tumours, anemia, disorders of the liver, bone marrow and lymphoid tissues.

Carcinogenicity: May cause cancer. Long-term or repeated exposures to Asphalt fumes are possibly carcinogenic to humans. This material contains Polycyclic Aromatic Hydrocarbons (PAHs), some of which are animal carcinogens.

Component Carcinogenicity

Component	ACGIH	IARC	NTP	OSHA	Prop 65
Asphalt	A4	Group 2B	Not listed.	OSHA Carcinogen.	Listed.
Benzene, ethenyl-, polymer with 1,3-butadiene	Not listed.	Group 3	Not listed.	Not listed.	Not listed.
Ethylene glycol	A4	Not listed.	Not listed.	Not listed.	Not listed.
Polycyclic Aromatic Hydrocarbons	A2	Not listed.	List 2	OSHA Carcinogen.	Listed.

Mutagenicity: Not available.

Reproductive Effects: Repeated exposures to Ethylene glycol may damage the developing fetus.

Developmental Effects
Teratogenicity: Not available.

Embryotoxicity: Not available.

Toxicologically Synergistic Materials: Not available.

Section 12: ECOLOGICAL INFORMATION
Ecotoxicity: Not available.

Persistence / Degradability: Not available.

Bioaccumulation / Accumulation: Not available.

Mobility in Environment: Not available.

Other Adverse Effects: Not available.**Section 13: DISPOSAL CONSIDERATIONS****Disposal Instructions:** Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.**Section 14: TRANSPORT INFORMATION****U.S. Department of Transportation (DOT)****Proper Shipping Name:** Not regulated.**Class:** Not applicable.**UN Number:** Not applicable.**Packing Group:** Not applicable.**Label Code:** Not applicable.**Canada Transportation of Dangerous Goods (TDG)****Proper Shipping Name:** Not regulated.**Class:** Not applicable.**UN Number:** Not applicable.**Packing Group:** Not applicable.**Label Code:** Not applicable.**Section 15: REGULATORY INFORMATION****Chemical Inventories****US (TSCA)**

The components of this product are in compliance with the chemical notification requirements of TSCA.

Canada (DSL)

The components of this product are in compliance with the chemical notification requirements of the NSN Regulations under CEPA, 1999.

Federal Regulations**United States**

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

California**California Prop 65:**

WARNING This product can expose you to chemicals including Asphalt and Polycyclic Aromatic Hydrocarbons, which are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Section 16: OTHER INFORMATION

Other information:

* The supplier's claim for trade secret exemption has been filed in Canada under HMIRA # 11395, May 12, 2017.

Disclaimer:

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for their own particular use.

Date of Preparation of SDS: April 29, 2020

Version: 1.2

GHS SDS Prepared by: **Deerfoot Consulting Inc.**

Phone: (403) 720-3700