

EDL Emulsion

SECTION 1. IDENTIFICATION

Product Identifier EDL Emulsion
Other Means of Identification EDL Emulsion
Recommended Use Dust Suppressant.
Restrictions on Use None known.
Manufacturer/Supplier Identifier McAsphalt Industries Ltd, 8800 Sheppard Ave East, Toronto, Ontario, M1B 5R4
Emergency Phone No. CANUTEC, (613) 996 - 6666, 24 hours
 McAsphalt Industries Ltd., 1 - (800) - 268 - 4238, 8AM-5PM Monday to Friday
SDS No. 0158

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.
 IF exposed or concerned: Get medical advice/attention.

Other Hazards

Dark Black. Characteristic asphaltic odour or "rotten egg" odour if H₂S is present, but odour is an unreliable warning since it may deaden the sense of smell. Electrostatic discharges may cause fire. May cause moderate or severe eye/skin irritation.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	%	Other Identifiers	Other Names
Asphalt (Bitumen) fume	8052-42-4	30-70		
Water	7732-18-5	25-50		
FUEL OIL NO. 2	68476-30-2	5-20		
Proprietary Surfactant Emulsifier	25155-30-0, 9004-82-4, 120-40-1,	0-4		

	1300-72-7, 64-17-5, 57-13-6			
Proprietary Surfactant Emulsifier	68081-81-2, 26027,38-3, 1300-72-7, 68585-34-2, 7757-82-6, 12125-02-9	0-4		

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Move to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. 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 15-20 minutes, while holding the eyelid(s) open. Get medical attention immediately.

Ingestion

Rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately. Call a Poison Centre or doctor if you feel unwell.

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 or burn the skin.

If in eyes: causes moderate to severe irritation. Symptoms include sore, red eyes, and tearing.

If swallowed: symptoms may include nausea, vomiting, stomach cramps and diarrhea.

Immediate Medical Attention and Special Treatment

Target Organs

Skin: can cause irritation, dermatitis. Skin defatting with chronic exposure.

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.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Carbon dioxide, dry chemical powder or appropriate foam.

Unsuitable Extinguishing Media

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

Flammable liquid and vapour. Can ignite at room temperature. Releases vapour that can form explosive mixture with air. Can be ignited by static discharge. See Section 9 (Physical and Chemical Properties) for flash point and explosive limits. Vapours may travel considerable distances to ignition sources and cause a flash fire. Cool containing vessels with water jet in order to prevent pressure build-up, auto-ignition or explosion.

This material is not sensitive to mechanical impact. This material is sensitive to static discharge at temperatures above the flash point.

Carbon oxides (CO, CO₂), smoke and irritating vapours as products of incomplete combustion. Hydrogen sulphide, smoke, fume, aldehydes, sulphur oxides, incomplete combustion products, oxides of carbon.

Special Protective Equipment and Precautions for Fire-fighters

Chemical protective clothing (e.g. chemical splash suit) and positive pressure SCBA may be necessary.

A full-body encapsulating chemical protective suit with 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 damaged containers or spilled product unless wearing appropriate protective equipment. Increase ventilation to area or move leaking container to a well-ventilated and secure area. Use the personal protective equipment recommended in Section 8 of this safety data sheet. Monitor area for flammable or explosive atmosphere.

Environmental Precautions

It is good practice to prevent releases into the environment. Do not allow into any sewer, on the ground or into any waterway. If the spill is inside a building, prevent product from entering drains, ventilation systems and confined areas. Minimize the use of water to prevent environmental contamination. 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. 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. Place used absorbent into suitable, covered, labelled containers for disposal.

Contaminated absorbent poses the same hazard as the spilled product. Large spills or leaks: dike spilled product to prevent runoff. Knock down gas with fog or fine water spray. Knock down vapour with fog or fine water spray. Do not direct water at spill or source. Remove or recover liquid using pumps or vacuum equipment. Flush spill area. Dike and recover contaminated water for appropriate disposal. Avoid generating dust. Avoid dry sweeping. If necessary, use a dust suppressant such as water. Do not use compressed air for clean-up. Use water fog or spray curtain to reduce amount of dust in air. Collect using shovel/scoop or approved HEPA vacuum and place in a suitable container for disposal. Get expert advice before treating the spilled product with other chemicals to make it less hazardous. Store recovered product in suitable containers that are: covered, tightly-covered. Review Section 13 (Disposal Considerations) of this safety data sheet. Contact emergency services and manufacturer/supplier for advice.

Other Information

Report spills to local health, safety and environmental authorities, as required. Contact supplier, local fire and emergency services for help. Do not use combustible absorbents, such as sawdust.

Product Identifier: EDL Emulsion - Ver. 1

SDS No.: 0158

Date of Preparation: January 24, 2018

Date of Last Revision: January 24, 2018

Page 03 of 09

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Only use where there is adequate ventilation. Avoid generating vapours or mists. Avoid generating dusts. Prevent uncontrolled release of product. Immediately report leaks, spills or failures of the safety equipment (e.g. ventilation system). In the event of a spill or leak, exit the area immediately. Eliminate heat and ignition sources such as sparks, open flames, hot surfaces and static discharge. Post "No Smoking" signs. Do not use near welding operations or other high energy sources. Avoid heating that will increase the amount of vapours. Do not weld, cut or perform hot work on empty container until all traces of product have been removed. Good housekeeping is extremely important. Prevent dust accumulation on ALL surfaces including ceiling rafters and other hidden surfaces. Do not use compressed air to clean equipment, clothing or spills. Electrically bond and ground equipment. Ground clips must contact bare metal. Increase conductivity by reducing flow rate in transfer operations and/or handle at lower temperature. Prevent accidental contact with incompatible chemicals. Avoid ALL unprotected contact with this product or with contaminated equipment/surfaces. Wear personal protective equipment to avoid direct contact with this chemical. Avoid repeated or prolonged skin contact with product or with contaminated equipment/surfaces. Prevent contamination of surfaces that unprotected personnel may use. Keep dry. Prevent exposure to water and humidity. Handle under inert gas atmosphere in dry equipment. Prevent any accidental contact with water in handling and storage areas. Avoid shock, friction or impact. Do not skid, drag or drop containers. Do not chip or grind lumps. 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 guaging and sampling.

Conditions for Safe Storage

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials(see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. 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. See advice on temperature in Conditions to Avoid in Section 10 (Stability and Reactivity) to determine suitable storage temperature. Electrically bond and ground containers. Ground clips must contact bare metal. Avoid bulk storage indoors. Do not handle swollen drums. Get expert advice. Empty containers may contain hazardous residue. Store separately. Keep closed. Follow all precautions given on this safety data sheet. Comply with all applicable health and safety regulations, fire and building codes.

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 ³ (I) A4 BEI		Not established			
Proprietary Surfactant Emulsifier	1 mg/m ³					
FUEL OIL NO. 2	5 mg/m ³ (I)	10 mg/m ³ (I)		5 mg/m ³ (I)		

Appropriate Engineering Controls

Use only with adequate ventilation. Exhaust ventilation/engineering controls need to keep vapour and gas concentrations below recommended limits and below any lower explosive limits.

Individual Protection Measures

Eye/Face Protection

Wear chemical safety goggles and face shield when contact is possible.

Skin Protection

Wear chemical protective clothing e.g. gloves, aprons, boots.

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.
Odour	Characteristic asphaltic odour or "rotten egg" odour if H ₂ 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 applicable (freezing)
Initial Boiling Point/Range	Not available
Flash Point	> 100 °C (212 °F) (closed cup)
Evaporation Rate	Not available
Flammability (solid, gas)	Not applicable
Upper/Lower Flammability or Explosive Limit	Not available (upper); Not available (lower)
Vapour Pressure	Not available
Vapour Density (air = 1)	Not available
Relative Density (water = 1)	Not available
Solubility	Insoluble in water
Partition Coefficient, n-Octanol/Water (Log K_{ow})	Not available
Auto-ignition Temperature	Not available
Decomposition Temperature	Not available
Viscosity	Not available (kinematic)
Other Information	
Physical State	Liquid
Bulk Density	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

Hazardous polymerizations does not occur.

Conditions to Avoid

Open flames, sparks, static discharge, heat and other ignition sources. Incompatible materials. Exposure to heat. Temperatures above 60.0 °C (140.0 °F)

Incompatible Materials

Acides. Bases. Oxidizers.

Hazardous Decomposition Products

Not available.

SECTION 11. TOXICOLOGICAL INFORMATION

The following toxicological assessment is based on knowledge of the toxicity of the product's components.

Likely Routes of Exposure

Eye contact; skin contact; inhalation; ingestion; skin absorption.

Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Asphalt (Bitumen) fume		> 5000 mg/kg (rat)	> 2000 mg/kg (rabbit)
FUEL OIL NO. 2	Not available	Not available	Not available

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.

Contact may cause irritation to the skin and mucous membranes upon prolonged and / or repeated skin contact. Prolonged or repeated contact to petroleum oil with skin may cause defatting of skin leading to redness, itching, inflammation, cracking, dermatitis (rash).

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 H₂S, eye irritation may include symptoms of redness, sever swelling, tearing, sensitivity to light and the appearance of 'Halos' around lights.

EYE IRRITANT. Symptoms include sore, red eyes, and tearing. Hot liquid product may cause thermal burns.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

May be harmful based on limited evidence.

May cause irritation to the respiratory system.

Vapours and gases from heated asphalt are obnoxious and toxic containing some hydrogen sulfide. Inhalation of hot asphalt fumes can produce eye and respiratory tract irritation, headache, nausea and nervousness due to the formation of hydrogen sulfide gas.

Skin Absorption

May be harmful based on limited evidence.

Harmful if absorbed through the skin.

Ingestion

May be harmful based on limited evidence.

Low order of acute toxicity. May cause nausea, vomiting and diarrhea.

Can irritate the mouth, throat and stomach. Permanent damage can result. Symptoms may include nausea, vomiting, stomach cramps and diarrhea.

Aspiration Hazard

Not known to be an aspiration hazard.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

Harmful based on limited evidence.

Prolonged or repeated contact may dry skin and cause irritation. Exposure to Naphtha may damage the blood-forming organs resulting in fatigue and anemia (RBC), decreased resistance to infection, and/or excessive bruising and bleeding (platelet effect). Peripheral nerve damage may be evidence by impairment of motor function (incoordination, unsteady walk, or muscle weakness in the extremities, and/or loss of sensation in the arms and legs). Auditory system effects may include temporary hearing loss and/or ringing in the ears. This product contains small quantities of 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. Long term inhalation of Benzene or Xylene vapours can result in bone marrow abnormalities with damage to blood forming tissues and may cause anemia and other blood cell abnormalities. Immunodepressive effects have also been reported. Hydrogen sulphide may reduce lung function; cause neurological effects such as headaches, nausea, depression and personality changes; eye and mucous membrane irritation: damage to cardiovascular system.

Product Identifier: EDL Emulsion - Ver. 1

SDS No.: 0158

Date of Preparation: January 24, 2018

Date of Last Revision: January 24, 2018

Page 06 of 09

Although the material in general is not considered to have chronic effects, it may contain benzene, a listed carcinogen. Refer to Section 11 of the MSDS for more detailed information.

Respiratory and/or Skin Sensitization

Not a respiratory sensitizer.

Carcinogenicity

Chemical Name	IARC	ACGIH®	NTP	OSHA
Asphalt (Bitumen) fume	Group 2B	A4		
FUEL OIL NO. 2	Group 2B			

Group 2B – Possibly carcinogenic to humans. 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).

Key to Abbreviations

Occupational exposure to hard bitumens and their emissions during mastic asphalt work IARC has reviewed the carcinogenicity of petroleum solvents (including Stoddard solvent in a sub-group of white spirits). IARC concluded that petroleum solvents are not classifiable as to their carcinogenicity to humans. (.

Reproductive Toxicity

Development of Offspring

Does not cause harm to the unborn child.
No known significant effects or critical hazards.

Sexual Function and Fertility

Does not cause effects on sexual function or fertility.
Not known to be a reproductive hazard.

Effects on or via Lactation

Not known to cause effects on or via lactation.

Germ Cell Mutagenicity

No information was located.
The material in general is not expected to produce mutagenic effects.

Interactive Effects

No information was located.
Not available

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.

Ecotoxicity

Marine Pollutant.

Persistence and Degradability

No information was located.

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. The required hazard evaluation of the waste and compliance with the applicable hazardous waste laws are the responsibility of the user. This product and its container must be disposed of as hazardous waste. Do NOT dump into any sewers, on the ground or into any body of water. The generation of waste should be avoided or minimized where ever possible. Significant quantities of waste product residue should not be disposed of via the foul sewer but processed in a suitable effluent treatment plan. Dispose of surplus and non-recyclable and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Disposal should be in accordance with applicable regional, national and local laws and regulations. Refer to Section 7: HANDLING AND STORAGE and sections *: EXPOSURE CONTROL/PERSONAL PROTECTION for additional handling information and protection of employees. The generation of waste should be avoided or minimized where ever possible. Significant quantities of waste product residue should not be disposed of via the foul sewer but processed in a suitable effluent treatment plan. Dispose of surplus and non-recyclable and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14. TRANSPORT INFORMATION

Not regulated under Canadian TDG regulations. Not regulated under US DOT Regulations.

Environmental Hazards Potential Marine Pollutant (Stoddard solvent)

Special Precautions Please note: PG* : Packing group

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

Not applicable

Other Information Canadian TDG Information: Not regulated as a dangerous good unless this product is shipped at a temperature above the flash point, OR when product is shipped at a temperature above 100 degree Celsius but lower than the flash point.

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

Canada

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

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

USA

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

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

Additional USA Regulatory Lists

SARA Title III - Section 302: Not listed SARA Title III - Section 304 EHS RQ (lbs.) Not listed SARA Title III - Section 313: Not listed CERCLA: Not listed RCRA CODE Not listed CAA 112(r) TQ (lbs.) Not listed.

Product Identifier: EDL Emulsion - Ver. 1

SDS No.: 0158

Date of Preparation: January 24, 2018

Date of Last Revision: January 24, 2018

Page 08 of 09

SECTION 16. OTHER INFORMATION

NFPA Rating **Health - 1** **Flammability - 0** **Instability - 0**

Based on Stoddard solvent

SDS Prepared By EPC & Risk Management Department

Phone No. 1 (416) 281 - 8181

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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
NTP = National Toxicology Program
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).

Product Identifier: EDL Emulsion - Ver. 1

SDS No.: 0158

Date of Preparation: January 24, 2018

Date of Last Revision: January 24, 2018

Page 09 of 09