



Rejuvenite

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name	Rejuvenite
Product Identifier	(i) Rejuvenite, (ii) Rej 700
Manufacturer / Supplier	McAsphalt Industries Ltd, 8800 Sheppard Ave East, Toronto, Ontario, M1B 5R4
Emergency Contact Information	CANUTEC, (613) 996 - 6666, 24 hours McAsphalt Industries Ltd., 1 - (800) - 268 - 4238, 8AM-5PM Monday to Friday
Use	Softening Agen for Asphalt Reclaiming

2. HAZARDS IDENTIFICATION

Emergency Overview Dark black - brown oily liquid. Characteristic asphaltic odour or "rotten egg" odour if H2S present, but odour is an unreliable warning, since it may deaden the sense of smell. (Asphalt (Bitumen)) odour. Presents little or no hazard if accidentally released. Can ignite if strongly heated.

Potential Health Effects

Route of Exposure No known significant effects or critical hazards. See toxicological information (Section 11).

Inhalation No known significant effects or critical hazards. 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, unconciosness and in cases of severe overexposure; coma and death. At higher concentrations (above 10 ppm), hydrgen 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 Contact Slightly irritating to the skin. Contact with hot material can cause thermal burns.

Eye Contact Hot liquid product may cause thermal burns. Slightly irritating to the eyes.

Ingestion Harmful. Symptoms may include nausea, vomiting, stomach cramps and diarrhea.

Effects of Long-Term (Chronic) Exposure No known significant effects or critical hazards.

Carcinogenicity 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).

Teratogenicity / Embryotoxicity No known significant effects or critical hazards.

Reproductive Toxicity No known significant effects or critical hazards.

Mutagenicity No known significant effects or critical hazards.

Potential Environmental Effects

Not hazardous to the environment.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Concentration %	Other Identifiers
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Solvent-refined heavy paraffinic petroleum distillate (mildly solvent-refined)	64741-88-4	40-70	
Water	7732-18-5	15-40	
Asphalt (Bitumen) fume	8052-42-4	0-40	
Emulsifier	61790-12-3, 8050-09-7	1-5	
Styrene-butadiene copolymers	9003-55-8	0-6	

Notes Antistripping additive added in quantities < 1% when indicated. Heated product may evolve vapors irritating to the nose, throat and lungs. See section 8 for further information. During storage or transit of hot asphalt, hydrogen sulphide may be generated.

4. FIRST AID MEASURES

First Aid Procedures

Inhalation	If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
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	Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. Get medical attention immediately.
Ingestion	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.
First Aid Comments	If exposed or concerned, see a doctor for medical advice.
Note to Physicians	No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5. FIRE FIGHTING MEASURES

Flammable Properties	Flammability of the product: Will burn on prolonged exposure to flame or high temperature.
Suitable Extinguishing Media	Large fire: Carbon dioxide, dry chemical powder, appropriate foam, water spray or fog.
Specific Hazards Arising from the Chemical	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 ₂), smoke and irritating vapours as products of incomplete combustion.
Protective Equipment and Precautions for Firefighters	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece. Firefighters may enter the area if positive pressure SCBA and full Bunker Gear is worn. See Skin Protection in Section 8 (Exposure Controls/Personal Protection) for advice on suitable chemical protective materials.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	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	Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Methods for	Note: see section 1 for emergency contact information.

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Containment and Clean-up

Other Information Contact supplier, local fire and emergency services for help. Report spills to local health, safety and environmental authorities, as required.

7. HANDLING AND STORAGE

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.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV®		OSHA PEL		AIHA WEEL	
	TWA	STEL	TWA	Ceiling	8-hr TWA	TWA
Styrene-butadiene copolymers	3 mg/m ³ (R)					
Solvent-refined heavy paraffinic petroleum distillate (mildly solvent-refined)	5 mg/m ³					

Engineering Controls 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.

Personal Protective Equipment (PPE)

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 If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location. 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.

General Hygiene Considerations It is good practice to: avoid breathing product; avoid skin and eye contact and wash hands after handling. Do NOT smoke in work areas. Do NOT eat, drink or store food in work areas. Remove contaminated clothing and protective equipment before entering eating areas or leaving work area. Wash hands thoroughly after handling this product and before eating, using the washroom or leaving work area. Properly dispose of any contaminated items, including shoes, that cannot be decontaminated. DO NOT re-use. See Section 13 (Disposal Considerations) of this MSDS.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Dark black - brown oily liquid.
Particle Size	Not available
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. (Asphalt (Bitumen))
Odour Threshold	Not available
Boiling Point	100 °C (212 °F) (estimated)
Freezing Point	Not available
Relative Density (water = 1)	Not available
Solubility in Water	Insoluble
Solubility in Other Liquids	Not available
pH	~ 3 (estimated)
Partition Coefficient, n-Octanol/Water	Not available
Viscosity-Kinematic	Not available
Surface Tension	Not available
Vapour Pressure	Not available
Vapour Pressure at 50 deg C	Not available
Saturated Vapour Concentration	Not available
Vapour Density (air = 1)	Not available
Evaporation Rate	Not available
Flash Point	> 200 °C (392 °F) (closed cup)
Lower Flammable/Explosive Limit	Not available
Upper Flammable/Explosive Limit	Not available
Auto-ignition Temperature	Not available
Electrical Conductivity	Not available

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal storage conditions.
Conditions to Avoid	Under normal conditions of storage and use, hazardous polymerisation will not occur. Exposure to heat.
Incompatible Materials	Reactive with oxidising agents acids. Bases. Oxidizers. Not corrosive to metals.
Hazardous Decomposition Products	May release CO _x , NO _x , SO _x , PO _x , H ₂ S, hydrocarbons, smoke and irritating vapours when heated to decomposition.
Possibility of Hazardous Reactions	Contact between heated Asphalt and water can cause a violent eruption. May release CO _x , NO _x , SO _x , PO _x , H ₂ S, hydrocarbons, smoke and irritating vapours when heated to decomposition.

11. TOXICOLOGICAL INFORMATION

LC50/LD50 Values

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Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Asphalt (Bitumen) fume	> 2180 mg/kg (rat) (4-hour exposure)	> 5000 mg/kg (rat)	2000 mg/kg
Solvent-refined heavy paraffinic petroleum distillate (mildly solvent-refined)		> 5000 mg/kg (rat)	> 2000 mg/kg (rabbit)
Emulsifier		2500 mg/kg (rat)	

Skin Irritation/Corrosion

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.

Eye Irritation/Corrosion

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, severe swelling, tearing, sensitivity to light and the appearance of 'Halos' around lights.

Effects of Short-Term (Acute) Exposure

Inhalation

May be harmful based on information for closely related materials. Yes, caution in confined spaces.

Skin Absorption

May be harmful based on information for closely related materials. Skin to darken.

Ingestion

Harmful based on information for closely related materials. Severe irritation or burns to the mouth, throat and stomach.

Effects of Long-Term (Chronic) Exposure

Harmful based on studies in people and animals. 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 evidenced 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.

Respiratory and/or Skin Sensitization

Not a respiratory sensitizer.

Carcinogenicity

Chemical Name	IARC	ACGIH®	NTP	OSHA
Emulsifier	Not Listed		Not Listed	Not Listed

The International Agency for Research on Cancer (IARC) has determined that occupational exposures to oxide asphalt and their emissions during roofing operations are "probably carcinogenic to humans" (Group A). IARC concluded that occupational exposures to hard asphalts and their emissions during mastic asphalt work are "possibly carcinogenic to humans" (Group 2B). IARC concluded that occupational exposure to straight-run asphalts and their emissions during paving operations are "possibly carcinogenic to humans" (Group 2B).

Key to Abbreviations

ACGIH® = American Conference of Governmental Industrial Hygienists. A3 = Animal carcinogen. IARC = International Agency for Research on Cancer. Group 2B = Possibly carcinogenic to humans. Group 3 = Not classifiable as to its carcinogenicity to humans. ACGIH® = American Conference of Governmental Industrial Hygienists. A4 = Not classifiable as a human carcinogen.

Teratogenicity / Embryotoxicity

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No information was located.

Reproductive Toxicity

No information was located.

Mutagenicity

No information was located.

Toxicologically Synergistic Materials

No information was located.

12. ECOLOGICAL INFORMATION

General Comments No known significant effects or critical hazards.

Ecotoxicity Studies were not located.

Persistence and Degradability Not available.

Bioaccumulation / Accumulation (Asphalt (Bitumen)) this product and its byproducts are not known to bioaccumulate.

Mobility Studies are not available.

Other Adverse Effects There is no information available.

13. DISPOSAL CONSIDERATIONS

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.

14. TRANSPORT INFORMATION

Shipping Information

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

Other Transport Information

Special Shipping Information 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 PG* : Packing group

Environmental Hazards Potential Marine Pollutant (FUEL OIL NO. 2)

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15. REGULATORY INFORMATION

Canada

WHMIS Classification

Not a WHMIS controlled product.

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

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. All ingredients are listed on the DSL/NDSL.

USA

US OSHA Regulatory Status

This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200 (1994)).

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

All ingredients are listed on the TSCA Inventory. The components of this product are in compliance with the chemical notification requirements of TSCA.

16. OTHER INFORMATION

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

MSDS Prepared By Engineering and Risk Management Department

Phone No. 1-800-268-4238

Date of Preparation March 18, 2015

Key to Abbreviations ACGIH® = American Conference of Governmental Industrial Hygienists

AIHA = American Industrial Hygiene Association

HSDB® = Hazardous Substances Data Bank

IARC = International Agency for Research on Cancer

NFPA = National Fire Prevention 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). Registry of Toxic Effects of Chemical Substances

(RTECS®) database. Accelrys, Inc. 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).

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