



Material Safety Data Sheet

Recycled Asphalt (RAP)

Section I: Material Identification and Use

Material Name/Identifier:	Recycled Asphalt, Crushed Asphalt, Reclaimed Asphalt, RAP, Recycled Asphalt Pavement
Chemical Name:	N/A
Chemical Family:	Carbonate Rock with Hydrocarbons
Chemical Formula:	Complex mixture (variable)
Trade Name & Synonyms:	Recycled Asphalt, Crushed Asphalt, Reclaimed Asphalt, RAP, Recycled Asphalt Pavement
Molecular Weight:	N/A
Material Use:	construction, road base

Section II: Hazardous Ingredients of Material

Hazardous Ingredient: A complex mixture of gravel or rock, sand, filler (eg. limestone or hydrated lime) and asphalt cement. It may contain fly ash, slag, fibres (synthetic or organic), colour pigment and other recycled material (eg. ceramics, plastic, glass, etc.). Properties and composition of RAP can vary depending on the original properties and composition of the recovered asphalt pavement.

C.A.S., N.A. or U.N. Numbers: N/A

LD50 (specify species & route): N/A

LC50 (specify species & route): N/A

Recycled Asphalt may contain varying concentrations of Quartz (Crystalline Silica)

C.A.S., N.A. or U.N. Number: 14808-60-7

Note: This MSDS is applicable to Recycled Asphalt only when the concentration of Quartz is greater than 0.1 (%) percent.

Section III: Physical Data for Material

Physical State:	Solid
Odour & Appearance:	No odour, angular grey/brown/white of varying sizes
Odour Threshold (P.P.M.):	N/A
Specific Gravity:	2.6-2.8
Vapour Pressure (MM):	N/A
Vapour Density (Air = 1):	N/A
Evaporation Rate:	0
Solubility in Water (20°C):	Negligible
Boiling Point (1°C):	N/A
Freezing Point (°C):	N/A
pH:	N/A
Percentage Volatile (by volume):	0
Coefficient of Water/Oil Distribution:	N/A

Section IV: Fire & Explosion Hazard of Material

Section not applicable

Section V: Reactivity Data

Chemical Stability: Yes
Incompatibility to other Substances: No
Reactivity and Under What Conditions: Neutralizing agent for strong acids
Hazardous Decomposition Products: CO² may be released on contact with strong acids

Section VI: Toxicological Properties of Material

Route of Entry: Skin contact, eye contact, inhalation
Effects of Acute Exposure of Material: Exposure to dust may irritate respiratory system, eyes and skin
Effects of Chronic Exposure to Material:
1. Chronic exposure to respirable recycled asphalt at levels exceeding exposure limits has caused pneumoconiosis.
2. Chronic exposure to respirable recycled asphalt dust containing Quartz at levels exceeding limits has caused silicosis, a serious and progressive pneumoconiosis which can be disabling, and lead to death. Symptoms may appear at any time, even years after exposure has ceased. Symptoms of silicosis may include; shortness of breath, difficulty in breathing, coughing, diminished work capacity, diminished chest expansion, reduction of lung volume and right heart enlargement and/or failure. The only reliable method of detecting silicosis is through a chest x-ray. Silicosis may aggravate other chronic pulmonary conditions and may increase the risk of pulmonary tuberculosis infection. Smoking aggravates the effects of silica exposure.

LD50: N/A
LC50: N/A

Exposure Limits (Ontario):

1. Respirable recycled asphalt dust – 0.2 mg/metre³ (TWAEV)
TWAEV - time weighted average exposure values

For additional information on the above exposure limits, consult Ontario Regulations 654/86 and 769/83 amended 23/87.

Irritancy of Material: Respiratory system, skin, eyes
Sensitization of Material: N/A
Synergistic Material: None Known

Carcinogenicity, reproductive effects, teratogenicity, mutagenicity as of the date of preparation of MSDS:

1. Recycled asphalt is not included on the ACGIH, IARC, or OSHA lists of potential carcinogens.
2. Silica, in form of crystalline Quartz, and as a component of this material, is listed as a potential carcinogen by IARC, but not y ACGIH, NTP, or OSHA, IARC (International Agency for Research on Cancer) has determined that there is sufficient evidence of carcinogenicity of crystalline silica to experimental animals, and that there is limited evidence of the carcinogenicity to humans. Limited evidence of carcinogenicity indicates that casual interpretation is credible, but alternate explanations such as change, bias or confounding factors could not adequately be excluded. There is no evidence that recycled asphalt is a teratogen, a mutagen or has a reproductive effect.

Section VII: Preventative Measures

- Personal Protective Equipment:** Respiratory protection should be used whenever dust is generated. Refer to the Ontario Regulation 769/83 as amended for respiratory equipment specified for various respirable silica dust levels.
- Engineering Controls:** (Ventilation, Enclosed Process): Where feasible, dust levels should be reduced through wet suppression, dust collection, ventilation, process enclosure, and enclosed pressurized employee work stations.
- Leak and Spill Procedures:** Spilled materials, where dust can be generated, may expose clean-up personnel to respirable dust. Wetting of spilled material and/or use of protective respiratory equipment may be necessary.
- Waste Disposal:** Re-use clean materials, dispose of waste materials only in accordance with applicable federal, provincial and local laws and regulations.
- Handling Procedures & Equipment:** Respirable dust may be generated during processing, handling and storage – avoid inhalation. Refer to “Personal Protective Equipment – Respiratory”
- Storage Requirements:** N/A
- Special Shipping Information:** N/A

Section VIII: First Aid Measures

- Dust in Eyes:** Flush out eyes with running water for 15 minutes. Contact physician if irritation persists.
- Dust on Skin:** Wash with soap and water. Contact physician if irritation is aggravated.
- Dust Inhalation:** Remove to fresh air. Dust in throat and nasal passages should clear spontaneously. Contact physician if irritation persists.

Section IX: Preparation of MSDS

- Prepared by:** Doughty Aggregates (Peterborough) Limited
- Manufacturer’s Name:** Doughty Aggregates (Peterborough) Limited
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- Preparation Date:** February 23, 2017

- Additional Notes or References:** Physical irritation may result from handling recycled asphalt. Work gloves and work clothing are recommended.

The company believes that the information contained herein is factual. The data and information presented are without warranty, guarantee or liability on our part, and are presented to the customer for his/her own consideration, investigation and verification.