



Rankin Construction Inc.
222 Martindale Rd. St. Catharines

PRODUCT: Hot Laid Asphaltic Concrete

Revised May 22, 2019

SDS Hot Laid Asphaltic Concrete

SECTION 01: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Manufacturer Rankin Construction Inc. Asphalt Plant
..... 3229 Thorold Townline Rd., Thorold Ontario
..... (905) 680 -4466
Approved by Peter Jesik – Operations Manager
Preparation Date January 25, 2012
Revision Date January 31, 2013
Revison Date May 22, 2019
Telephone number 905-684-1111
Product Name HL1,HL2,HL3,HL3A,HM3,HD,HL4,HL8,HL8RAP,HL8HS,DFC
Chemical Family :.....Carbonate Rock, Petroleum Hydrocarbon
Chemical Formula Complex Mixture
Product Use: Paving Mixture.

SECTION 02: HAZARDS IDENTIFICATION

Hot Mix Asphalt or HMA, often referred to as simply "Asphalt" is a combination of aggregates, filler (cement, hydrated lime or stone dust) and a bituminous binder called asphalt cement. It consists of angular dark gray to black particles ranging in size from powder to small stones. It has a mild petroleum odor.

The IARC, NTP and OSHA do not list asphalt as a carcinogen. In general, the oxidation of polycyclic aromatic hydrocarbons destroys their carcinogenic potential. Petroleum asphalt, shale oil asphalts and coal tars show distinct variation in their relative carcinogenicity for experimental animals. NIOSH describes asphalt as a carcinogen with no further categorization. Crystalline silica, a component of this product, has been designated as a Group I carcinogen by IARC. The NTP has listed respirable crystalline silica as a known human carcinogen and the ACGIH has listed respirable crystalline silica as a suspected humancarcinogen (A-2 designation). OSHA does not list crystalline silica as a carcinogen.

Health Effects: The information below represents an overview of health effects caused by overexposure to one or more components in hot mixed asphalt and hardened hot asphalt.

Hot Asphalt

Contact with hot asphalt can cause severe thermal burns. Vapors can irritate the eyes or skin. Inhalation of fumes from hot asphalt can cause nausea and irritation of the nose and throat. Exposure to asphalt fumes can cause dermatitis and can photosensitize the skin, making it more susceptible to the adverse effects of sunlight.

Hardened Asphalt

Cutting, grinding, crushing or drilling hardened asphalt may generate dust containing crystalline silica.

Primary Route(s) of Exposure: Inhalation Skin Ingestion

EYE CONTACT: Exposure to hot asphalt produces a direct thermal burn. Exposure to asphalt fumes when the hot mixed asphalt is heated may cause irritation, redness or pain. Direct contact with asphalt dust may cause irritation by mechanical abrasion. Conjunctivitis may occur.

SKIN CONTACT: Direct skin contact with hot asphalt produces a scald-like lesion. The asphalt tends to adhere to the skin but may come off in blistered areas. Patchy areas of full thickness skin loss are common. Direct contact with asphalt dust may cause irritation by mechanical abrasion or corrosiveness of product.

SKIN ABSORPTION: Not expected to be a significant exposure route.

INGESTION: Ingestion of hot asphalt produces a direct thermal burn to the mouth and throat. Small amounts (a tablespoonful) of hardened asphalt/asphalt dust swallowed during normal handling operations are not likely to cause injury. Ingestion of large amounts of hardened asphalt/asphalt dust may cause gastrointestinal irritation and blockage.

INHALATION: Inhalation of hot asphalt fumes can cause headache, nausea, and respiratory tract irritation, and nervousness due to the formation of hydrogen sulfide gas. Inhalation of hydrogen sulfide gas can cause upper respiratory tract irritation and, if exposure is prolonged at levels above the OSHA PEL of 20ppm (ceiling), pulmonary edema and even coma or death. Asphalt dusts may irritate the nose, throat, and respiratory tract by mechanical abrasion or corrosive action. Coughing, sneezing, chest pain, shortness of breath, inflammation of mucous membrane, and flu-like fever may occur following exposures in excess of appropriate exposure limits. Repeated excessive exposure may cause pneumoconiosis, such as silicosis and other respiratory effects.

Silicosis:

Use of hot mixed asphalt for construction purposes is not believed to cause additional acute toxic effects. Repeated overexposures to respirable crystalline silica (quartz, cristobalite, tridymite) for periods as short as 6 months has caused acute silicosis.

Symptoms of acute silicosis include (but are not limited to): shortness of breath, cough, fever, weight loss, and chest pain. Silicosis is a rapidly progressive, incurable lung disease and is typically fatal.

Chronic exposure to respirable quartz-containing dust in excess of appropriate exposure limits has caused silicosis, a progressive pneumoconiosis (lung disease). Restrictive and/or obstructive lung function changes may result from chronic exposure.

SECTION 03: COMPOSITION/INFORMATION ON INGREDIENTS

Component	% By Weight	CAS Number	OSHA PEL-TWA (mg/m3)
Limestone	65-95	1317-65-3	10mg/m3
Asphalt Cement	5-7	8052-42-4	Not Avail.
Reclaim Asphalt	0-30	Not Established	Not Avail
Quartz (Crystalline Silica)	Varies	14808-60-7	0.3 mg/m3 * 0.1 mg/m3**

*Total Dust

**Respiratory Dust

Note: Hot Laid Asphaltic Concrete is a mixture of gravel or rock, sand and asphalt cement. It may also contain small amounts of RAP, Fly ash, slag, fibers (synthetic or organic) and, color pigment.

SECTION 04: FIRST AID MEASURES

EYES: If hot asphalt splashes into the eyes, immediately flush with copious amounts of water. DO NOT attempt to remove asphalt particles from eyes. OBTAIN MEDICAL ATTENTION IMMEDIATELY. For hardened asphalt dust in eyes, flush immediately and continuously with running water for at least 15 minutes, while holding the eyelid(s) open. Seek medical attention if irritation persists.

SKIN: Quickly remove contaminated clothing. If molten asphalt contacts the skin, cool immediately by quenching with cold water. For extensive burns, cover with sterile dressing. DO NOT use solvents to remove asphalt from skin. OBTAIN MEDICAL ATTENTION IMMEDIATELY. For asphalt dust, wash skin thoroughly with soap and water. Seek medical attention if irritation persists.

INGESTION: Direct contact with heated material can produce thermal burns on contacted tissues. Hot mixed asphalt has a low toxicity when ingested. However, petroleum distillates may be absorbed from the gastrointestinal tract, with possible systemic effects (gastrointestinal irritation, vomiting, diarrhea, and CNS depression) and possible aspiration into the lungs. Aspiration of petroleum distillates has caused pulmonary edema and chemical pneumonitis. Oral ingestion of cool asphalt is relatively nontoxic. If person is conscious, give a large quantity of water and induce vomiting; however, never attempt to make an unconscious person drink or vomit. Seek medical attention.

INHALATION: Remove to fresh air. If breathing is difficult, administer oxygen. If breathing has stopped, give artificial respiration. Keep person warm and quiet. OBTAIN MEDICAL ATTENTION IMMEDIATELY. Dust in throat and nasal passages should clear spontaneously. Seek medical attention if irritation persists or develops later.

SECTION 05: FIRE FIGHTING MEASURES

FLASHPOINT >270°F

FLAMMABLE LIMITS IN AIR.....Not Flammable

EXTINGUISHING AGENT

Dry chemical, carbon dioxide, regular foam or water fog. Water may be ineffective in fighting such fires but may be used to keep the fire-exposed containers cool.

SPECIAL FIRE FIGHTING PROCEDURES

Since fire may produce toxic fumes, wear a self-contained breathing apparatus (SCBA) with a full face-piece operated in the pressure-demand or positive mode.

UNUSUAL FIRE AND EXPLOSION HAZARD

Water may cause frothing. Contact with powerful oxidizing agents may cause fire and/or explosions (see Section X of this MSDS). When product is heated or comes in contact with sparks or flames, the vapors formed may result in explosive mixtures with air. Vapors may travel to source of ignition and flash back. Fires may produce irritating, corrosive and/or toxic gases. The health effects of these products are further discussed in Section XI.

SECTION 06: ACCIDENTAL RELEASE MEASURES

General: Use a shovel to scrape up material and place material into suitable containers for recovery or disposal. Do not wash Asphalt cement down sewage and drainage systems or into bodies of water. Wear appropriate protective equipment as described in Section 8.

Waste Disposal Method: Dispose of Asphalt Cement according to Provincial, Federal, State and Local regulations.

SECTION 07: HANDLING AND STORAGE

General Follow protective controls set forth in Section VIII of this MSDS when handling this product. Use in well-ventilated areas. Avoid inhalation of fumes! Contact with hot asphalt can cause severe burns! Do not store near heat, sparks, flame or strong oxidants. Dusts created by drilling or grinding cured asphalt may irritate the eyes and respiratory tract. For such operations use approved respirators and avoid breathing dusts.

USAGE Cutting, crushing or grinding hardened asphalt cement or other crystalline silica-bearing materials will release respirable crystalline silica. Use all appropriate measures of dust control or suppression, and Personal Protective Equipment (PPE) described in Section 8 below.

STORAGE Do not expose to open flames, strong oxidizers or other source of ignition.

CLOTHING Promptly remove and launder clothing that is soiled with asphalt. Thoroughly wash skin after exposure to dust.

SECTION 08: EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS

Ventilation: Use local exhaust, general ventilation or natural ventilation adequate to maintain exposures below appropriate exposure and flammability limits. If a person breathes large amounts of this material, move the exposed person to fresh air at once and seek medical attention immediately.

PERSONAL PROTECTIVE EQUIPMENT (PPE):

EYE/FACE PROTECTION

Safety glasses with side shields should be worn as minimum protection. Dust goggles should be worn when excessively (visible) dusty conditions are present or are anticipated. Contact lenses should not be worn when working with this material.

SKIN PROTECTION

When handling heated material, avoid direct contact with skin by using heat insulated gloves and protective clothing.

RESPIRATORY PROTECTION

Under ordinary conditions no respiratory protection is required. Wear a NIOSH approved respirator that is properly fitted and is in good condition when exposed to dust or fumes above exposure limits.

SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Solid
Appearance: Various colors and shapes
Odor: None
Boiling Point: NA
Specific Gravity: 2.5
Vapor Pressure: NA
Vapor Density: NA
Evaporation Rate: NA
Solubility in Water: INSOLUABLE
PH Value: 7 (in water)
Freezing Point: NA
Viscosity: NA

SECTION 10: STABILITY AND REACTIVITY

STABILITY / INCOMPATIBILITY Stable
INCOMPATIBILITY None
HAZARDOUS POLYMERIZATION None
HAZARDOUS DECOMPOSITION None

SECTION 11: TOXICOLOGICAL INFORMATION

Irritancy of Material Refer to routes of entry
Sensitizing Capability of Material None known.
Carcinogenicity of Material Limestone is not listed on the IARC or ACGIH lists of carcinogens. Crystalline silica, a component of this product, is listed by the IARC but not by ACGIH. IARC has determined that there is sufficient evidence for carcinogenicity to experimental animals exposed to crystalline silica and limited evidence for carcinogenicity to humans. "Limited evidence" means that a causal relationship is possible; however, other explanations such as chance, bias or compounding factors (example smoking) cannot adequately be excluded.
Teratogenicity Not Available
Mutagenicity Not Available
Reproductive Effects There is no evidence that limestone is a reproductive toxin, teratogen or mutagen.
Synergistic Materials Not Available

SECTION 12: ECOLOGICAL INFORMATION

Environmental Not Known
Ectotoxicological Information Not Known
Biodegradability Not Known

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Clean material may be reused. Dispose of contaminated material in accordance with all municipal, provincial and federal regulations.

SECTION 14: TRANSPORT INFORMATION

U.N. # Not Regulated
T.D.G. Classification Not Regulated

SECTION 15: REGULATORY INFORMATION

OSHA/MSHA HAZARD COMMUNICATION

This product is considered by OSHA/MSHA to be a hazardous chemical and should be included in the employer's hazard communication program.

SECTION 16: OTHER INFORMATION

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind expressed or implied is made with respect to the information contained herein.