



GARLAND INDUSTRIES

Material Safety Data Sheet (MSDS)

MSDS Status: Current
Product Name: MILLENNIUM, MILLENNIUM MINERAL,
MILLENNIUM FR MINERAL, MILLENNIUM BASE
Product Code: 4601, 4602, 4603, 4620

Product Status: Active
Revision Date: 2006-04-17
Version: 2006.1

SECTION I - CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Chemical Name: MIXTURE

CAS No.: Not Applicable

Product Description: Rolled roofing

Hazard Classification: HEALTH - 2 FLAMMABILITY - 1 REACTIVITY - 0

Manufacturer/Supplier: THE GARLAND COMPANY, INC. GARLAND CANADA, INC.
3800 EAST 91ST. STREET 1290 MARTIN GROVE ROAD
CLEVELAND, OHIO 44105-2197 TORONTO, ONTARIO M9W4X3
PH: (216) 641-7500 FAX: (216) 641-0633 PH: (416) 747-7995 FAX: (416) 747-1980

Internet Address: <http://www.garlandco.com>
24 HR EMERGENCY ASSISTANCE: 1-800-762-8225

SECTION II - HAZARDOUS INGREDIENTS/COMPOSITION

Ingredient:	Case Number:	Wgt. %
Coal Tar Pitch	65996-93-2	55-65
Roofing Granules (metamorphous silico-alumina rock)	N/A	0-25
Mineral Fillers*	N/A	8-20
Styrene-Butadiene-Styrene Block Copolymer	9003-55-8	8-15
Fire Retardant (FR only)	68333-79-9	5-15
Petroleum oil	94742-65-0	7-10
Petroleum oil	64742-52-5	3-5
Fiberglass Mat (or Polyester)	N/A	1-4
Sand	N/A	1-4

*Includes: metamorphous silico-alumina slate shist, calcium borate, limestone

Trace impurities and additional material names not listed above may appear in the Regulatory Information section towards the end of the MSDS. These may be listed for local Right-To-Know compliance and other reasons.

SECTION III - HAZARDS IDENTIFICATION

ROUTES OF ENTRY: INHALATION, DERMAL, INGESTION.

Emergency Overview:

Vapors generated during installation may cause moderate to severe irritation of Eyes, nose, throat and respiratory tract. Liquid can cause burning and itching with Reddening of the skin, which is accentuated by sunlight. Burning may emit hazardous fumes, Which can form flammable or explosive mixtures.

SKIN: Contact with skin can result in irritation which when not washed off or when accentuated by sunlight, can result in minor burns. Contact with heated material can cause severe thermal burns.

EYES: Heated product may generate fumes, vapors or dust can cause irritation and burning. Eye contact with product will result in irritation, which in the absence of recommended first aid can result in effects ranging from minor burns to severe corneal injury.

INHALATION: Heated product may generate fumes, vapors or dust can cause temporary respiratory tract irritation. Prolonged exposure in significant excess of permissible air concentrations can result in acute toxic effects, such as coughing, sneezing, headache, dizziness, respiratory difficulty and convulsions.

INGESTION: Ingestion may result in irritation of the gastrointestinal tract accompanied by one or more of the following: nausea and vomiting, abdominal discomfort, rapid pulse.

OTHER: Individuals with chronic respiratory disorders, a history of central nervous system (CNS) functional illness or preexisting skin disorders may be more susceptible to the effects of exposure when working with this material.

DELAYED EFFECTS: Prolonged and repeated skin exposure over many months to years, in the absence of recommended hygiene practices, may lead to changes in skin pigmentation and benign skin growths. These effects appear to be exacerbated by simultaneous exposures to ultraviolet light (sunlight). Long term exposure to coal tar pitch volatiles has been associated with the development of skin, bladder, scrotum and lung cancer.

SECTION IV - FIRST AID PROCEDURES

INHALATION: Remove victim from exposure area immediately to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately. Keep person warm and quiet.

SKIN CONTACT: For contact with **molten** product, do not remove-contaminated clothing. Immediately Flush skin with large amounts of cold water. If possible submerge area in cold water. Pack With ice and seek immediate medical attention. For other contact, remove contaminated Clothing/shoes and wash exposed area with non-abrasive soap and water. Do not use solvents on Skin as they promote absorption of this material. If irritation persists, get medical Attention. Do not re-use work clothing until they have been thoroughly cleaned.

EYE CONTACT: If eye contact occurs, flush eyes immediately with large amounts of water for 15 minutes, occasionally lifting eyelids and get medical attention.

INGESTION: Give 3-4 glasses of water, but DO NOT induce vomiting. Get IMMEDIATE medical attention.

Advice to Physician: Depending on amount ingested, observation and symptomatic treatment may be Best. If gastric lavage is necessary, perform in accordance with procedures for ingestion of Petroleum products.

SECTION V - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: >374°F
AUTOIGNITION TEMPERATURE: Not Determined
LEL (LOWER EXPLOSION LIMIT): Not Determined
UEL (UPPER EXPLOSION LIMIT): Not Determined
EXTINGUISHING MEDIA: Carbon dioxide, foam, dry chemicals, or water fog.

SPECIAL FIRE FIGHTING PROCEDURES: Self-contained (full face MSHA/NIOSH) breathing apparatus and full protective clothing should be worn when fumes and/or smoke are present.

Water or foam can be used to contain unconfined tar fires, however, water may cause frothing or Splattering. Normal fire fighting procedures may be used. Use water or water spray to cool Fire exposed containers and structures and to protect personnel.

UNUSUAL FIRE AND EXPLOSION HAZARD: Burning may emit hazardous fumes/vapors which may be in concentrations greater than PEL/TLVs. Burning may emit hazardous fumes, which can form flammable or explosive mixtures. Coal tar pitch at elevated temperatures may generate vapors that can form flammable/explosive mixtures in the presence of air and a source of ignition. Liquid molten pitch at elevated temperatures will sustain combustion.

SECTION VI - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IF RELEASED OR SPILLED: Material is not normally involved in a spill/release Scenario. Avoid breathing vapors and contact with the skin and eyes. Avoid sources of Ignition. Ventilate the area if release occurs indoors. Use of water spray will aid in Solidifying material and minimize vapor emissions. Contain runoff of fire control water. Do not allow runoff to enter into sewers, waterways or open bodies of water.

SECTION VII - SAFE HANDLING AND STORAGE

HANDLING AND STORAGE PRECAUTIONS: Avoid prolonged and repeated contact with skin or breathing of vapors, dusts, or fumes. Ensure work area is well ventilated.

DO NOT LET AIR INTAKES DRAW ODOR INDOORS.
KEEP OUT OF REACH OF CHILDREN.

SECTION VIII - EXPOSURE CONTROL/PERSONAL PROTECTION

VENTILATION: Use in areas with adequate natural ventilation or provide sufficient local/general exhaust ventilation in pattern/volume to maintain concentrations below the PEL/TLV and to maintain areas below flammable or explosive level concentrations.

GLOVES: Use chemical resistant, if needed, to avoid prolonged or repeated skin contact.

EYE PROTECTION: Use safety glasses, goggles or face shield when eye contact may occur.

RESPIRATOR: If under normal conditions of use, irritation occurs, or if the TLV is exceeded, use a NIOSH/MSHA approved air purifying respirator with organic vapor cartridges or canisters and a Dust/mist pre-filter. Not required for properly ventilated areas.

SKIN PROTECTION: For exposed skin, use protective barrier creams. Also protect skin from direct sunlight. For outdoor work use approved waterproof sunscreen with an SPF of 25 or greater. Re-apply every 90 minutes while in direct sun.

CLOTHING: Full long-sleeved clothing closed at the neck and non-porous gloves are recommended. To further reduce skin exposure, apply approved creams to form, an un-penetrable barrier on the skin. A complete change of work clothing should be used each day. Launder separately from other household clothing.

HYGIENIC PRACTICES: Wash hands thoroughly before eating, drinking, smoking or using the restroom. A complete soap/water shower and/or steam bath should be taken at the end of every work day. Provide readily available eye wash and wash stations.

EXPOSURE GUIDELINES:

<u>Ingredient</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>
Cola Tar Pitch Volatiles	0.2 mg/m ³	0.2 mg/m ³

SECTION IX - PHYSICAL/CHEMICAL CHARACTERISTICS

APPEARANCE: Dull black rolled roofing with sand and/or colored rock surface
PHYSICAL STATE: Solid
ODOR: Aromatic odor
MELTING POINT: Not Applicable
SOLUBILITY IN WATER: NEGLIGIBLE
pH: NOT APPLICABLE
DENSITY: **Greater than 8.4**

SECTION X - STABILITY AND REACTIVITY DATA

STABILITY: Stable under normal conditions.
CONDITIONS TO AVOID: Open flames and intense heat.
MATERIALS TO AVOID: None known.

HAZARDOUS DECOMPOSITION: Material does not decompose under normal conditions of use. Upon heating or burning, the material decomposes, and may emit hazardous carbon monoxide and dioxide, Oxides of nitrogen and sulfur, hydrocarbons.

WILL POLYMERIZATION OCCUR: No

SECTION XI - TOXICOLOGICAL INFORMATION

IMMEDIATE (ACCUTE) EFFECTS: Acute exposure to coal tar pitch volatiles can be irritating to the skin, eyes and respiratory tract and can cause dermatitis and photosensitivity.

DELAYED (SUBCHRONIC AND CHRONIC) EFFECTS: Long term exposure to Coal Tar Pitch Volatiles (CTPV), above the recommended exposure limit, has been associated with the development of skin, kidney, lung bladder and scrotum cancer.

OTHER DATA: IARC Group 1 - Sufficient evidence of carcinogenicity in humans. No scientific study supports an association between coal tar pitch exposure and human reproductive hazards. Available data characterizes coal tar pitch as a mutagen.

SECTION XII - ECOLOGICAL INFORMATION

Not Determined.

SECTION XIII - DISPOSAL CONSIDERATIONS

RCRA

Is the unused product a RCRA hazardous waste if discarded: No

Dispose of in accordance with local, federal, state and municipal regulations.

SECTION XIV - TRANSPORTATION INFORMATION

Material Not Required:

SECTION XV - REGULATORY INFORMATION

Toxic Substances Control Act (TSCA)

TSCA INVENTORY STATUS: All components of product are listed on EPA's TSCA Inventory.

OTHER TSCA ISSUES: Substance of unknown or variable composition.

SARA Title III/CERCLA

"Reportable Quantities" (RQS) and/or "Threshold Planning Quantities" (TPQS) exist for the following ingredients.

<u>Ingredient</u>	<u>CAS#</u>	<u>SARA/CERCLA RQ (lb)</u>	<u>SARA EHS TPQ (lb)</u>
Acenaphthene	83-32-9	100	
Anthracene	120-12-7	5000	
Benzo (a) anthracene	56-55-3	10	
Benzo (c) acridine	225-51-4	100	
Benzo (b) fluoranthene	205-99-2	1	
Benzo (k) fluoranthene	207-08-9	5000	
Benzo (j) fluoranthene	205-82-3	---	
Benzo (a) pyrene	50-32-8	1	
Benzo (e) pyrene	192-97-2	---	
Chrysene	218-01-9	100	
Dibenz (a,h) anthracene	53-70-3	1	
Dibenzofuran	132-64-9	100	
Fluranthene	206-44-0	100	
Fluorene	86-73-7	5000	
Indeno (1,2,3-cd) pyrene	193-39-5	100	
2-Methylnaphthalene	91-57-6	---	
Naphthalene	91-20-3	100	
Phenanthrene	85-01-8	5000	
Pyrene	129-00-0	5000	

*see 40 CFR 355.30(2) (i)

Spills or releases resulting in the loss of any ingredient at or above its RQ requires immediate notification to the National Response Center (800-424-8802) and your local Emergency Planning Committee.

Section 313 Hazard Class: Immediate, Delayed, Fire

SARA 313 Toxic Chemicals

The following ingredients are SARA 313 "Toxic Chemicals". CAS numbers and weight percents are found in Section II.

<u>Ingredients</u>	<u>CAS#</u>	<u>Weight %</u>
Benzo (a) anthracene	56-55-3	0.5
Benzo (b) fluoranthene	205-99-2	0.3
Benzo (k) fluoranthene	207-08-9	0.5 (includes (k))
Benzo (k) fluoranthene	207-08-9	included above
Benzo (j) fluoranthene	205-82-3	0.1
Benzo (g,h,i) perylene	191-24-2	0.1
Chrysene	218-01-9	0.1
Indeno (1,2,3-cd)pyrene	193-39-5	0.1
Phenanthrene	85-01-8	1.2
Polycyclic Aromatic Compounds (20 compounds)	---	2.1

*Also included in "polycyclic aromatic compound" category

CA PROP 65: This product contains chemicals known to the State of California to cause cancer, Birth defects & other reproductive harm.

WHMIS Classification (Canada): Class D, Division 2, Subdivision A

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

Foreign Inventory Status: Listed on the EINECS Inventory - ID#2660282 (coal tar pitch)
Listed on Canadian Inventory Domestic Substance List (DSL) -coal tar pitch.

SECTION XVI - ADDITIONAL INFORMATION

CHANGES: New MSDS.

Disclaimer

The information contained in this Material Safety Data Sheet has been prepared in accordance with the OSHA Hazard communication Standard CFR 1910.1200. This information relates specifically to the product designated and may not be valid for the product when used in combination with any other materials or products or in a particular process. The information is, to the best of our knowledge and belief, accurate and reliable as of the date compiled. However, no representation, warranty or guarantee is made as to its accuracy, reliability or completeness, whether originating within the company or not. The user should review this information, satisfy itself as to its suitability and completeness, and pass on the information to its employees or customers in accordance with applicable federal, state or local hazard communications requirements. We do not accept responsibility for any loss or damage which may occur from the use of this information.

Prepared By: John Wenneman

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