



GARLAND INDUSTRIES

Material Safety Data Sheet (MSDS)

MSDS Status: Current
Product Name: SILVER-SHIELD
Product Code: 7421
MSDS No.: 200212

Product Status: Active
Revision Date: 2006-11-17
Version: 2006.1

SECTION I - CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Chemical Name: MIXTURE

CAS No.: NOT APPLICABLE

Product Description: Aluminized gilsonite asphalt coating

Hazard Classification: **Health-** 2 **Flammability-** 2 **Reactivity-** 1

Manufacturer/Supplier: THE GARLAND COMPANY, INC. GARLAND CANADA, INC.
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SECTION II - HAZARDOUS INGREDIENTS/COMPOSITION

HAZARDOUS INGREDIENTS	%WT	CAS NUMBER	OSHA PEL (TWA)	AGCIH TLV (TWA)	ORAL LD50	INHAL LC50	DERMAL LD50
MINERAL SPIRITS*	<40	8052-41-3	100ppm/8H	100ppm/8H	>5g/kg rat	5.5g/m ³ rat	>3ml/kg rabbit
PETROLEUM ASPHALT**	<40	8052-42-4	5mg/m ³	0.5mg/m ³ asphalt fumes			
1,2,4-TRIMETHYLBENZENE (PSEUDOCUMENE)	<5	95-63-6	N/A	N/A			
ALUMINUM FLAKE	<30	7429-90-5	15mg/m ³ dust	10mg/m ³ dust			
MINERAL SPIRITS EXEMPT	<13	8032-32-4	100ppm	100ppm			
STEARIC ACID	<5	57-11-4	N/A	N/A	23mg/kg		
GILSONITE RESIN	<7	12002-43-6	5mg/m ³ dust	5mg/ m ³ dust			

*, ** - SEE SECTION XI (TOXICOLOGICAL INFORMATION)

N/A = Not Available

SECTION III - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: SOLVENTS ARE COMBUSTIBLE, AND POSSIBLY IRRITATING TO SKIN, EYES, RESPIRATORY TRACT AND MAY CAUSE DIZZINESS AND CENTRAL NERVOUS SYSTEM DISORDERS UPON INHALATION.

DO NOT GET ON EYES OR SKIN. DO NOT BREATHE VAPORS.

ROUTES OF ENTRY: INHALATION, DERMAL, INGESTION

CARCINOGENICITY: According to IARC (International Agency for Research on Cancer), asphalt is known to be carcinogenic in laboratory animals, but there is insufficient evidence that it is carcinogenic in humans.

ACUTE HEALTH HAZARD:

INHALATION: Can cause dizziness, headaches, loss of appetite, nausea, and possible eyes, nose, throat, lungs, respiratory tract, and mucous membrane irritation. The solvents can effect the central nervous system (CNS), including general weakness, loss of memory, loss of balance and coordination, jitters, effects mimicking drunkenness, unconsciousness, respiratory failure, or death.

SKIN: Contact can cause dermatitis, irritation, and defatting.

EYES: Can cause severe irritation, redness, tearing and blurred vision.

INGESTION: Harmful or fatal if swallowed: Can cause mouth, throat, and gastrointestinal tract irritation, including abdominal pain, nausea, vomiting and diarrhea. Bloody ingestion may cause CNS depression. (See Inhalation, above.) Can cause low blood pressure, rapid heart beat, jaundice and liver damages. Aspiration of the mineral spirits portion of this product into the lungs can cause severe chemical pneumonitis, which might be fatal.

EFFECTS OF CHRONIC EXPOSURE: Overexposure to vapors may adversely affect heart, liver, brain, kidneys, and respiratory system. Prolonged or repeated skin contact with this product may result in irritation or dermatitis. Long-term exposure to asphalt fumes can increase sensitivity to sun and cause skin discoloration.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Respiratory problems, diseases of the skin, eyes, liver, kidney, nervous system, pulmonary system and lungs.

SECTION IV - FIRST AID PROCEDURES

EYE CONTACT: Flush eyes with plenty of water for 15 minutes while holding eyelids open. Get medical attention.

SKIN CONTACT: Remove contaminated clothing/shoes. Flush with water and wash with waterless hand cleaner. Follow by washing with soap and water. If irritation occurs, get medical attention. Do not reuse clothing until cleaned.

INHALATION: Remove victim to fresh air and provide oxygen (by trained personnel) if breathing is difficult. Give artificial respiration if not breathing. Get medical attention. Keep person warm and quiet.

INGESTION: Get medical attention. Do not give anything by mouth to an unconscious person. Only induce vomiting under medical supervision. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs.* Keep person warm and quiet.

***Note to Physician:** If more than 2.0 ml per kg has been ingested and vomiting has not occurred, emesis should be induced with supervision. Keep victim's head below hips to prevent aspiration. If symptoms such as loss of gag reflex, convulsions or unconsciousness occur before emesis, gastric lavage using a cuffed endotracheal tube should be considered.

SECTION V - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: 105⁰F (41⁰C) (TAG CLOSED CUP)
AUTOIGNITION TEMP.: N/A
LEL (LOWER EXPLOSION LIMIT): 0.8%
UEL (UPPER EXPLOSION LIMIT): 6.0%

EXTINGUISHING MEDIA: FOAM, CARBON DIOXIDE, DRY CHEMICAL
(Do not use halogenated agents.)

SPECIAL FIRE FIGHTING PROCEDURES: Combustible material; clear area. Do not enter any enclosed or confined space without proper protective equipment. Fire fighters should wear self-contained breathing apparatus with a full facepiece operated in a positive pressure demand mode. Cool fire exposed containers with water.

UNUSUAL FIRE AND EXPLOSION HAZARD: Exposure to water releases hydrogen gas, which can be explosive.

A) SENSITIVITY TO IMPACT: NO

B) SENSITIVITY TO STATIC DISCHARGE: YES

SECTION VI - ACCIDENTAL RELEASE MEASURES

Steps to be taken in case material is released or spilled: Wear proper protective clothing as stated in Section VIII - Exposure Controls, Personal Protection. Remove all sources of ignition. Remove all non-essential personell. For large spills remove excess material with vacuum truck. For small spills us an absorbent such as clay, vermiculite, earth and place in proper containers for disposal. Dispose of material as a hazardous waste as is stated in Section XIII - Disposal Considerations.

SECTION VII - SAFE HANDLING AND STORAGE

HANDLING AND STORAGE PRECAUTIONS: Keep away from ignition sources such as heat, spark, or flame. Keep containers closed tightly. Never us a welding or cutting torch on or near a container (even when empty); residual product can ignite explosively.

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

SECTION VIII - EXPOSURE CONTROL/PERSONAL PROTECTION

VENTILATION: Normal use is on a roof; ventilation is not required. Use positive ventilation in enclosed areas. If the PEL, TLV, or LEL is exceeded, use a NIOSH/MSHA approved breathing apparatus. Make sure that ventilation equipment does not draw material orders indoors.

GLOVES: Solvent resistant, such as neoprene or Buna-N.

EYE PROTECTION: Safety glasses with side shields or safety goggles.

CLOTHING: Normal long-sleeved and long-pant work clothes. Change immediately if contaminated and be sure to wash thoroughly before reuse.

HYGIENIC PRACTICES: Do not wear contact lenses when handling this material. Wash hands before eating, smoking, or using the toilet. Do not smoke in any chemical handling or storage area. Food or beverages should not be consumed in areas immediate to the use of this product. A complete soap and water shower should be taken at the end of each workday. Provide readily available eyewash station and washing station.

SECTION IX - PHYSICAL/CHEMICAL CHARACTERISTICS

EVAPORATION RATE: 1 (n-butyl acetate = 1)
SOLUBILITY IN WATER: NIL
SPECIFIC GRAVITY: 0.95
BOILING POINT: 300-390⁰F (149-199⁰C)
VOLATILES: 44-50%
VAPOR PRESSURE: 5mm Hg @100⁰F (38⁰C)
VAPOR DENSITY: 3.9 (AIR = 1)
APPEARANCE AND ODOR: aluminum liquid, solvent odor

SECTION X - STABILITY AND REACTIVITY DATA

STABILITY: Stable under normal conditions of use. Contains aluminum. Slight chance of explosion.
INCOMPATIBILITY: Oxidizers
CONDITIONS TO AVOID: Water, heat, sparks, and open flames

HAZARDOUS DECOMPOSITION PRODUCTS: With water, hydrogen gas is evolved. In fire carbon dioxide (CO₂), carbon monoxide (CO), and unidentified organic compounds may be evolved.

WILL POLYMERIZATION OCCUR: No

SECTION XI - TOXICOLOGICAL INFORMATION

* The manufacturers of mineral spirits recommend an 8-hour time-weighted permissible short term exposure limit (STEL) of 300 mg/m³.

- Draize skin irritation score is: 4.5 out of 8.0.
- Draize eye irritation scores are: 1.0, 0.0, 0.0, 0.0 out of 110
@: 24H, 48H, 72H, 168H.

** OSHA has not established a specific PEL for asphalt fumes. They are considered as "particulates not otherwise regulated" with a PEL of 5mg/m³ for respirable dust fraction and 15mg/m³ for the total dust fraction.

SECTION XII - ECOLOGICAL INFORMATION

No data available

SECTION XIII - DISPOSAL CONSIDERATIONS

Hazardous waste if discarded. RCRA ID #D001. Recycle or incinerate at an EPA approved facility or dispose of in compliance with applicable Federal, State, County, and Local requirements.

SECTION XIV - TRANSPORTATION INFORMATION

NON-BULK < 119 gallon container size

DOT-U.S./MOT-CANADA

PROPER SHIPPING NAME: Non Regulated Material
HAZARD CLASS: N/A
IDENTIFICATION NO: N/A
PACKAGING GROUP: N/A

Re-classed under 49CFR 173.120(b)(2). Not regulated under 49CFR 173.150(f)(2).

BULK > 119 gallon container size

DOT-U.S./MOT-CANADA/INTL.

PROPER SHIPPING NAME: TARS, LIQUIDS
HAZARD CLASS: 3
IDENTIFICATION NO: UN1999
PACKAGING GROUP: III

INTL.(VESSEL/AIR) - NON-BULK < 119 gallon container size

PROPER SHIPPING NAME: TARS, LIQUIDS

HAZARD CLASS: 3

IDENTIFICATION NO: UN1999

PACKAGING GROUP: III

SECTION XV - REGULATORY INFORMATION

SARA 313: This product contains the following material(s) subject to the reporting requirements of Section under Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR 372.

1,2,4-TRIMETHYLBENZENE (PSEUDOCUMENE) CAS NO. 95-63-6 1-5%

RCRA ID: Waste #D001

CA Prop 65: This product contains a chemical known to the State of California to cause cancer.

WHIMS: This material contains the following ingredient(s) at, or above the minimum concentration specified on the WHMIS Ingredient Disclosure List under the Hazardous Products Act of Canada:

STODDARD SOLVENT (MINERAL SPIRITS), CAS NO. 8052-41-3, 15-40%

1,2,4-TRIMETHYLBENZENE (PSEUDOCUMENE), CAS NO. 95-63-6 1-5%

ALUMINUM, CAS NO. 7429-90-5 10-30%

STEARIC ACID, CAS NO. 57-11-4 1-5%

VOC Status: 315 g/l max.

SECTION XVI - ADDITIONAL INFORMATION

CHANGES: none

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.

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