



Garla-Flex®

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Revision Date: 05/13/2015 Date of issue: 06/01/2015

Version: 1.0

SECTION 1: IDENTIFICATION

Product Identifier

Product Name: Garla-Flex®

Product Code: 9332

Intended Use of the Product

Elastomeric asphaltic mastic. For professional use only.

Name, Address, and Telephone of the Responsible Party

Manufacturer

The Garland Company, Inc.
3800 East 91st Street
Cleveland, Ohio 44105-2197
T-800-762-8225
F-216-641-0633
www.garlandco.com

Supplier

The Garland Company, Inc.
3800 East 91st Street
Cleveland, Ohio 44105-2197
T-800-762-8225
F-216-641-0633

The Garland Company, Inc.
209 Carrier Drive
Toronto, Ontario M9W 5Y8
T-416-747-7995 800-387-5991
F-416-747-1980

Emergency Telephone Number

Emergency number : 1-800-762-8225 24 hours

SECTION 2: HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

Classification (GHS-US)

Flam. Liq. 3 H226
Eye Irrit. 2A H319
Muta. 1B H340
Carc. 1A H350
STOT RE 1 H372
Asp. Tox. 1 H304
Aquatic Acute 1 H400
Aquatic Chronic 2 H411

Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US)



Signal Word (GHS-US)

: Danger

Hazard Statements (GHS-US)

: H226 - Flammable liquid and vapor
H304 - May be fatal if swallowed and enters airways
H319 - Causes serious eye irritation
H340 - May cause genetic defects
H350 - May cause cancer
H372 - Causes damage to organs through prolonged or repeated exposure
H400 - Very toxic to aquatic life
H411 - Toxic to aquatic life with long lasting effects

Precautionary Statements (GHS-US)

: P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P210 - Keep away from heat, hot surfaces, open flames, sparks. - No smoking
P233 - Keep container tightly closed
P240 - Ground/bond container and receiving equipment
P241 - Use explosion-proof electrical, lighting, ventilating equipment
P242 - Use only non-sparking tools

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P243 - Take precautionary measures against static discharge
P260 - Do not breathe mist, spray, vapors
P264 - Wash hands, forearms and exposed areas thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P273 - Avoid release to the environment
P280 - Wear eye protection, protective clothing, protective gloves
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P308+P313 - If exposed or concerned: Get medical advice/attention
P314 - Get medical advice and attention if you feel unwell
P331 - If swallowed, do NOT induce vomiting
P337+P313 - If eye irritation persists: Get medical advice/attention
P370+P378 - In case of fire: Use appropriate media to extinguish
P391 - Collect spillage
P403+P235 - Store in a well-ventilated place. Keep cool
P405 - Store locked up
P501 - Dispose of contents/container according to local, regional, national, and international regulations

Other Hazards

Other Hazards Not Contributing to the Classification: Contains a small amount of hydrogen sulfide. Hydrogen sulfide is a fatal, and highly flammable gas with a rotten egg odor that quickly causes odor fatigue. Heating of this product and storage under elevated temperatures or over long periods of time may release higher amounts of hydrogen sulfide. Hydrogen sulfide is also an asphyxiant.

Unknown Acute Toxicity (GHS-US) Not available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Name	Product identifier	% (w/w)	Classification (GHS-US)
Asphalt	(CAS No) 8052-42-4	40 - 70	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 Carc. 2, H351
Benzene, 1,2,4-trimethyl-	(CAS No) 95-63-6	10 - 15	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation:vapour), H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Carc. 2, H351 STOT SE 3, H335 Asp. Tox. 1, H304 Aquatic Acute 2, H401 Aquatic Chronic 2, H411
Attapulgate	(CAS No) 12174-11-7	5 - 10	Carc. 2, H351
1,3,5-Trimethylbenzene	(CAS No) 108-67-8	5 - 10	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335 Asp. Tox. 1, H304 Aquatic Acute 2, H401 Aquatic Chronic 2, H411
Solvent naphtha, petroleum, light aromatic	(CAS No) 64742-95-6	1 - 5	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Muta. 1B, H340

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			Carc. 1B, H350 Repr. 2, H361 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 2, H401 Aquatic Chronic 2, H411
Carbon black	(CAS No) 1333-86-4	0.5 - 1.5	Carc. 2, H351
Xylenes (o-, m-, p- isomers)	(CAS No) 1330-20-7	0.5 - 1.5	Flam. Liq. 3, H226 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation:vapour), H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 2, H401
Quartz	(CAS No) 14808-60-7	0.5 - 1.5	Carc. 1A, H350 STOT SE 3, H335 STOT RE 1, H372
Extracts, petroleum, heavy paraffinic distillate solvent	(CAS No) 64742-04-7	0.1 - 1	Carc. 1B, H350
Cumene	(CAS No) 98-82-8	0.1 - 1	Flam. Liq. 3, H226 Carc. 2, H351 STOT SE 3, H335 STOT SE 1, H370 STOT RE 1, H372 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 2, H411
2,2'-Methylenebis(4-methyl-6-tert-butylphenol)	(CAS No) 119-47-1	0.1 - 1	Repr. 2, H361
Zinc oxide	(CAS No) 1314-13-2	0.1 - 1	Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Sulfur	(CAS No) 7704-34-9	0.1 - 1	Comb. Dust Skin Irrit. 2, H315 Eye Irrit. 2B, H320 Aquatic Acute 3, H402
Stearic acid	(CAS No) 57-11-4	0.1 - 1	Comb. Dust
Alcohols, C9-11-iso-, C10-rich	(CAS No) 68526-85-2	0.03	Aquatic Acute 1, H400
Styrene-1,3-Butadiene polymer, hydrogenated	(CAS No) 66070-58-4	0.01	Comb. Dust
Talc	(CAS No) 14807-96-6	0.01	Comb. Dust
Hydrogen sulfide	(CAS No) 7783-06-4	0.005	Flam. Gas 1, H220 Liquefied gas, H280 Acute Tox. 2 (Inhalation:gas), H330 Eye Irrit. 2A, H319 STOT SE 1, H370 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

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SECTION 4: FIRST AID MEASURES

Description of First Aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). If exposed or concerned: Get medical advice/attention.

Inhalation: When symptoms occur: go into open air and ventilate suspected area. Seek medical attention.

Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Seek medical attention.

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical attention.

Ingestion: Rinse mouth. Do NOT induce vomiting. Seek medical attention.

Most Important Symptoms and Effects Both Acute and Delayed

General: Causes eye irritation. Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed. Swallowing the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis.

Inhalation: May cause irritation to the respiratory tract.

Skin Contact: May cause skin irritation.

Eye Contact: Causes eye irritation.

Ingestion: Ingestion is likely to be harmful or have adverse effects. Aspiration into the lungs can occur during ingestion or vomiting and may cause lung injury.

Chronic Symptoms: May cause genetic defects. May cause cancer. Causes damage to organs through prolonged or repeated exposure.

Indication of Any Immediate Medical Attention and Special Treatment Needed

If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: dry chemical powder, alcohol-resistant foam, carbon dioxide (CO₂). Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media: Do not use extinguishing media containing water. Water or foam may cause frothing. Use of water on product above 100 °C (212 °F) can cause product to expand with explosive force.

Special Hazards Arising From the Substance or Mixture

Fire Hazard: This product is flammable.

Explosion Hazard: Product is not explosive.

Reactivity: Flammable liquid and vapor.

Advice for Firefighters

Precautionary Measures Fire: Not available

Firefighting Instructions: Exercise caution when fighting any chemical fire.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Carbon dioxide, carbon monoxide, smoke, fumes, unburned hydrocarbons and oxides of sulfur and/or nitrogen. Hydrogen sulfide and other sulfur-containing gases can evolve from this product particularly at elevated temperatures. Hot asphalt can release toxic Hydrogen Sulfide gas! Hydrogen Sulfide can accumulate in vapor space of tanks and vessels during transfer and storage of this material.

Reference to Other Sections

Refer to section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Ventilate area.

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Environmental Precautions

Prevent entry to sewers and public waters.

Methods and Material for Containment and Cleaning Up

For Containment: Let the product solidify. Absorb and/or contain spill with inert material, then place in suitable container. Do not take up in combustible material such as: saw dust or cellulosic material.

Methods for Cleaning Up: Clear up spills immediately and dispose of waste safely.

Reference to Other Sections

See heading 8, Exposure Controls and Personal Protection.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work.

Conditions for Safe Storage, Including Any Incompatibilities

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container tightly closed.

Storage Area: Store locked up. Store in a well-ventilated place.

Specific End Use(s)

Asphalt Roofing Sealant/Mastic

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Asphalt (8052-42-4)		
Mexico	OEL TWA (mg/m ³)	5 mg/m ³
Mexico	OEL STEL (mg/m ³)	10 mg/m ³
USA ACGIH	ACGIH TWA (mg/m ³)	0.5 mg/m ³
USA NIOSH	NIOSH REL (ceiling) (mg/m ³)	5 mg/m ³
Ontario	OEL TWA (mg/m ³)	0.5 mg/m ³
Zinc oxide (1314-13-2)		
Mexico	OEL TWA (mg/m ³)	10 mg/m ³
Mexico	OEL STEL (mg/m ³)	10 mg/m ³
USA ACGIH	ACGIH TWA (mg/m ³)	2 mg/m ³
USA ACGIH	ACGIH STEL (mg/m ³)	10 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m ³)	5 mg/m ³
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	5 mg/m ³
USA NIOSH	NIOSH REL (STEL) (mg/m ³)	10 mg/m ³
USA NIOSH	NIOSH REL (ceiling) (mg/m ³)	15 mg/m ³
USA IDLH	US IDLH (mg/m ³)	500 mg/m ³
Ontario	OEL STEL (mg/m ³)	10 mg/m ³
Ontario	OEL TWA (mg/m ³)	2 mg/m ³
Sulfur (7704-34-9)		
Alberta	OEL TWA (mg/m ³)	10 mg/m ³
Carbon black (1333-86-4)		
Mexico	OEL TWA (mg/m ³)	3.5 mg/m ³
Mexico	OEL STEL (mg/m ³)	7 mg/m ³
USA ACGIH	ACGIH TWA (mg/m ³)	3 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m ³)	3.5 mg/m ³
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	0.1 mg/m ³ (Carbon black in presence of Polycyclic aromatic hydrocarbons)
USA IDLH	US IDLH (mg/m ³)	1750 mg/m ³
Ontario	OEL TWA (mg/m ³)	3 mg/m ³

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1,3,5-Trimethylbenzene (108-67-8)		
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	125 mg/m ³
USA NIOSH	NIOSH REL (TWA) (ppm)	25 ppm
Benzene, 1,2,4-trimethyl- (95-63-6)		
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	125 mg/m ³
USA NIOSH	NIOSH REL (TWA) (ppm)	25 ppm
Xylenes (o-, m-, p- isomers) (1330-20-7)		
Mexico	OEL TWA (mg/m ³)	435 mg/m ³
Mexico	OEL TWA (ppm)	100 ppm
Mexico	OEL STEL (mg/m ³)	655 mg/m ³
Mexico	OEL STEL (ppm)	150 ppm
USA ACGIH	ACGIH TWA (ppm)	100 ppm
USA ACGIH	ACGIH STEL (ppm)	150 ppm
USA OSHA	OSHA PEL (TWA) (mg/m ³)	435 mg/m ³
USA OSHA	OSHA PEL (TWA) (ppm)	100 ppm
Ontario	OEL TWA (ppm)	100 ppm
Quartz (14808-60-7)		
Mexico	OEL TWA (mg/m ³)	0.1 mg/m ³
USA ACGIH	ACGIH TWA (mg/m ³)	0.025 mg/m ³
USA OSHA	OSHA PEL (STEL) (mg/m ³)	250 mppcf/%SiO ₂ +5, 10mg/m ³ /%SiO ₂ +2
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	0.05 mg/m ³
USA IDLH	US IDLH (mg/m ³)	50 mg/m ³
Ontario	OEL TWA (mg/m ³)	0.10 mg/m ³ (designated substances regulation)
Hydrogen sulfide (7783-06-4)		
Mexico	OEL TWA (mg/m ³)	14 mg/m ³
Mexico	OEL TWA (ppm)	10 ppm
Mexico	OEL STEL (mg/m ³)	21 mg/m ³
Mexico	OEL STEL (ppm)	15 ppm
USA ACGIH	ACGIH TWA (ppm)	1 ppm
USA ACGIH	ACGIH STEL (ppm)	5 ppm
USA OSHA	OSHA PEL (Ceiling) (ppm)	20 ppm
USA NIOSH	NIOSH REL (ceiling) (mg/m ³)	15 mg/m ³
USA NIOSH	NIOSH REL (ceiling) (ppm)	10 ppm
USA IDLH	US IDLH (ppm)	100 ppm
Ontario	OEL STEL (ppm)	15 ppm
Ontario	OEL TWA (ppm)	10 ppm
Attapulgite (12174-11-7)		
Québec	VEMP (mg/m ³)	1 fibers/cm ³
Talc (14807-96-6)		
Mexico	OEL TWA (mg/m ³)	2 mg/m ³
USA ACGIH	ACGIH TWA (mg/m ³)	2 mg/m ³
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	2 mg/m ³ (containing no Asbestos and <1% Quartz)
USA IDLH	US IDLH (mg/m ³)	1000 mg/m ³ (containing no asbestos and <1% quartz)
Ontario	OEL TWA (mg/m ³)	2 mg/m ³ (containing no Asbestos and <1% Crystalline silica)
Cumene (98-82-8)		
Mexico	OEL TWA (mg/m ³)	245 mg/m ³
Mexico	OEL TWA (ppm)	50 ppm
Mexico	OEL STEL (mg/m ³)	365 mg/m ³

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Mexico	OEL STEL (ppm)	75 ppm
USA ACGIH	ACGIH TWA (ppm)	50 ppm
USA OSHA	OSHA PEL (TWA) (mg/m ³)	245 mg/m ³
USA OSHA	OSHA PEL (TWA) (ppm)	50 ppm
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	245 mg/m ³
USA NIOSH	NIOSH REL (TWA) (ppm)	50 ppm
USA IDLH	US IDLH (ppm)	900 ppm (10% LEL)
Ontario	OEL TWA (ppm)	50 ppm
Coal, anthracite (8029-10-5)		
USA ACGIH	ACGIH TWA (mg/m ³)	0.4 mg/m ³

Exposure Controls

Appropriate Engineering Controls: Ensure all national/local regulations are observed. Gas detectors should be used when flammable gases/vapours may be released.

Personal Protective Equipment: Gloves. Protective clothing. Protective goggles. Insufficient ventilation: wear respiratory protection.



Materials for Protective Clothing: Not available

Hand Protection: protective gloves.

Eye Protection: Chemical goggles or safety glasses.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: If exposure limits are exceeded or irritation is experienced, NIOSH approved respiratory protection should be worn.

Other Information: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State	: Liquid
Appearance	: Viscous, Black
Odor	: Petroleum distillate
Odor Threshold	: Not available
pH	: Not available
Relative Evaporation Rate (butylacetate=1)	: Not available
Melting Point	: Not available
Freezing Point	: Not available
Boiling Point	: 149 - 179 (300.2-354.2°F)
Flash Point	: 38 °C (100.4°F)
Auto-ignition Temperature	: Not available
Decomposition Temperature	: Not available
Flammability (solid, gas)	: Not available
Lower Flammable Limit	: Not available
Upper Flammable Limit	: Not available
Vapor Pressure	: Not available
Relative Vapor Density at 20 °C	: Not available
Relative Density	: Not available
Specific Gravity	: 0.96 g/ml
Solubility	: Negligible
Partition coefficient: n-octanol/water	: Not available
Viscosity	: Not available

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Explosion Data – Sensitivity to Mechanical Impact : Not expected to present an explosion hazard due to mechanical impact.
Explosion Data – Sensitivity to Static Discharge : Not expected to present an explosion hazard due to static discharge.
VOC : 250 g/L

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Flammable liquid and vapor.

Chemical Stability: Product is stable.

Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

Conditions to Avoid: Direct sunlight. Extremely high or low temperatures. Open flame.

Incompatible Materials: strong acids. Strong bases. Strong oxidizers.

Hazardous Decomposition Products: Carbon dioxide, carbon monoxide, smoke, fumes, unburned hydrocarbons and oxides of sulfur and/or nitrogen. Hydrogen sulfide and other sulfur-containing gases can evolve from this product particularly at elevated temperatures. Hot asphalt can release toxic Hydrogen Sulfide gas! Hydrogen Sulfide can accumulate in vapor space of tanks and vessels during transfer and storage of this material.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects - Product

Acute Toxicity: Not classified

LD50 and LC50 Data: Not available

Skin Corrosion/Irritation: Not classified

Serious Eye Damage/Irritation: Causes serious eye irritation.

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: May cause genetic defects.

Teratogenicity: Not available

Carcinogenicity: May cause cancer.

Specific Target Organ Toxicity (Repeated Exposure): Causes damage to organs through prolonged or repeated exposure.

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Aspiration Hazard: May be fatal if swallowed and enters airways.

Symptoms/Injuries After Inhalation: May cause irritation to the respiratory tract.

Symptoms/Injuries After Skin Contact: May cause skin irritation.

Symptoms/Injuries After Eye Contact: Causes eye irritation.

Symptoms/Injuries After Ingestion: Ingestion is likely to be harmful or have adverse effects. Aspiration into the lungs can occur during ingestion or vomiting and may cause lung injury.

Chronic Symptoms: May cause genetic defects. May cause cancer. Causes damage to organs through prolonged or repeated exposure.

Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

Asphalt (8052-42-4)	
LD50 Oral Rat	> 5000 mg/kg
LD50 Dermal Rabbit	> 2000 mg/kg
Zinc oxide (1314-13-2)	
LD50 Oral Rat	> 5000 mg/kg
Sulfur (7704-34-9)	
LD50 Oral Rat	> 3000 mg/kg
LD50 Dermal Rabbit	> 2000 mg/kg
LC50 Inhalation Rat (mg/l)	> 9.23 mg/l/4h
Alcohols, C9-11-iso-, C10-rich (68526-85-2)	
LD50 Oral Rat	> 2648 mg/kg
LD50 Dermal Rabbit	> 3.16 mg/kg

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LC50 Inhalation Rat (ppm)	> 95.3 ppm
Extracts, petroleum, heavy paraffinic distillate solvent (64742-04-7)	
LD50 Oral Rat	> 2000 mg/kg
LD50 Dermal Rabbit	> 2000 mg/kg
1,3,5-Trimethylbenzene (108-67-8)	
LC50 Inhalation Rat (mg/l)	24 g/m ³ (Exposure time: 4 h)
2,2'-Methylenebis(4-methyl-6-tert-butylphenol) (119-47-1)	
LD50 Oral Rat	> 10000 mg/kg
LD50 Dermal Rabbit	> 10000 mg/kg
Benzene, 1,2,4-trimethyl- (95-63-6)	
LD50 Oral Rat	6000 mg/kg
LD50 Dermal Rabbit	> 3160 mg/kg
LC50 Inhalation Rat (mg/l)	18 g/m ³ (Exposure time: 4 h)
Xylenes (o-, m-, p- isomers) (1330-20-7)	
LD50 Oral Rat	4300 mg/kg
LC50 Inhalation Rat (mg/l)	47635 mg/l/4h (Exposure time: 4 h)
LC50 Inhalation Rat (ppm)	6247 ppm/4h (species: Sprague-Dawley)
Quartz (14808-60-7)	
LD50 Oral Rat	> 5000 mg/kg
Hydrogen sulfide (7783-06-4)	
LC50 Inhalation Rat (mg/l)	0.99 mg/l (Exposure time: 1 h)
Solvent naphtha, petroleum, light aromatic (64742-95-6)	
LD50 Dermal Rabbit	> 2000 mg/kg
LC50 Inhalation Rat (ppm)	3400 ppm/4h
ATE CLP (gases)	3400.000 ppmV/4h
Cumene (98-82-8)	
LD50 Oral Rat	2260 mg/kg
LD50 Dermal Rabbit	10000 mg/kg
LC50 Inhalation Rat (mg/l)	20 - 40 mg/l (Exposure time: 6 h)
Asphalt (8052-42-4)	
IARC Group	2B
National Toxicity Program (NTP) Status	Twelfth Report - Items under consideration.
Carbon black (1333-86-4)	
IARC Group	2B
Styrene-butadiene copolymer (9003-55-8)	
IARC Group	3
Xylenes (o-, m-, p- isomers) (1330-20-7)	
IARC Group	3
Quartz (14808-60-7)	
IARC Group	1
National Toxicity Program (NTP) Status	Known Human Carcinogens.
Attapulgite (12174-11-7)	
IARC Group	2B, 3
Talc (14807-96-6)	
IARC Group	3

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National Toxicity Program (NTP) Status	Evidence of Carcinogenicity, Twelfth Report - Items under consideration.
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Cumene (98-82-8)

IARC Group	2B
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National Toxicity Program (NTP) Status	Evidence of Carcinogenicity.
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SECTION 12: ECOLOGICAL INFORMATION

Toxicity Not classified

Zinc oxide (1314-13-2)

LC50 Fish 1	780 µg/l Species: Pimephales promelas
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NOEC chronic fish	0.026 mg/l Species: Jordanella floridae
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Sulfur (7704-34-9)

LC50 Fish 1	866 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])
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LC 50 Fish 2	14 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
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Alcohols, C9-11-iso-, C10-rich (68526-85-2)

LC50 Fish 1	3 mg/l
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LC50 other aquatic organisms 1	2.4 mg/l Algae
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EC50 Daphnia 1	4 µg/l
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Carbon black (1333-86-4)

LC50 Fish 1	5601 mg/l
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EC50 Daphnia 1	5600 mg/l (Exposure time: 24 h - Species: Daphnia magna)
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Extracts, petroleum, heavy paraffinic distillate solvent (64742-04-7)

EC50 Daphnia 1	1.4 mg/l (Exposure time: 48 h - Species: Daphnia magna)
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1,3,5-Trimethylbenzene (108-67-8)

LC50 Fish 1	3.48 mg/l (Exposure time: 96 h - Species: Pimephales promelas)
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Benzene, 1,2,4-trimethyl- (95-63-6)

LC50 Fish 1	7.19 (7.19 - 8.28) mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
-------------	---

EC50 Daphnia 1	6.14 mg/l (Exposure time: 48 h - Species: Daphnia magna)
----------------	--

Xylenes (o-, m-, p- isomers) (1330-20-7)

LC50 Fish 1	3.3 mg/l
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EC50 Daphnia 1	3.82 mg/l (Exposure time: 48 h - Species: water flea)
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LC 50 Fish 2	2.661 (2.661 - 4.093) mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])
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Hydrogen sulfide (7783-06-4)

LC50 Fish 1	0.0448 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [flow-through])
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LC 50 Fish 2	0.016 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
--------------	--

Solvent naphtha, petroleum, light aromatic (64742-95-6)

LC50 Fish 1	9.22 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)
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EC50 Daphnia 1	6.14 mg/l (Exposure time: 48 h - Species: Daphnia magna)
----------------	--

Talc (14807-96-6)

LC50 Fish 1	> 100 g/l (Exposure time: 96 h - Species: Brachydanio rerio [semi-static])
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Cumene (98-82-8)

LC50 Fish 1	6.04 - 6.61 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
-------------	--

EC50 Daphnia 1	0.6 mg/l (Exposure time: 48 h - Species: Daphnia magna)
----------------	---

LC 50 Fish 2	4.8 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through])
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EC50 Daphnia 2	7.9 - 14.1 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
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Persistence and Degradability

Garla-Flex®	
Persistence and Degradability	Not established.

Bioaccumulative Potential

Garla-Flex®	
Bioaccumulative Potential	Not established.

Asphalt (8052-42-4)

BCF fish 1	(no bioaccumulation expected)
Log Pow	> 6

Extracts, petroleum, heavy paraffinic distillate solvent (64742-04-7)

Log Pow	> 0.5 (at 20 °C)
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Benzene, 1,2,4-trimethyl- (95-63-6)

Log Pow	3.63
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Xylenes (o-, m-, p- isomers) (1330-20-7)

BCF fish 1	0.6 (0.6 - 15)
Log Pow	2.77 - 3.15

Hydrogen sulfide (7783-06-4)

BCF fish 1	(no bioaccumulation expected)
Log Pow	0.45 (at 25 °C)

Talc (14807-96-6)

BCF fish 1	(no known bioaccumulation)
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Cumene (98-82-8)

BCF fish 1	35.5
Log Pow	3.55 (at 23 °C)

Mobility in Soil

Stearic acid (57-11-4)	
Log Koc	51.05

Other Adverse Effects

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, and international regulations.

Additional Information: Prevent runoff from entering drains, sewers or waterways.

SECTION 14: TRANSPORT INFORMATION

14.1 In Accordance with DOT

Proper Shipping Name : Non-Regulated Material
Hazard Class : 3
Identification Number : UN1999
Label Codes : 3
Packing Group : III
ERG Number : 128

14.2 In Accordance with IMDG

Proper Shipping Name : TAR, LIQUID
Hazard Class : 3
Identification Number : UN1999
Packing Group : III
Label Codes : 3



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EmS-No. (Fire) : F-E

EmS-No. (Spillage) : S-E

MFAG Number : 130

14.3 In Accordance with IATA

Proper Shipping Name : TARS, LIQUID

Packing Group : III

Identification Number : UN1999

Hazard Class : 3

Label Codes : 3

ERG Code (IATA) : 3L



14.4 In Accordance with TDG

Proper Shipping Name : TARS, LIQUID

Packing Group : II

Hazard Class : 3

Identification Number : UN1999

Label Codes : 3



SECTION 15: REGULATORY INFORMATION

US Federal Regulations

Asphalt (8052-42-4)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

1-Propanamine, 3-(isodecyloxy)-, acetate (28701-67-9)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Zinc oxide (1314-13-2)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Sulfur (7704-34-9)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Stearic acid (57-11-4)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Alcohols, C9-11-iso-, C10-rich (68526-85-2)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Carbon black (1333-86-4)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Styrene-1,3-Butadiene polymer, hydrogenated (66070-58-4)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Styrene-butadiene copolymer (9003-55-8)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

1,3-Butadiene, 2-methyl-, homopolymer (9003-31-0)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Extracts, petroleum, heavy paraffinic distillate solvent (64742-04-7)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

1,3,5-Trimethylbenzene (108-67-8)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

EPA TSCA Regulatory Flag

T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA.

2,2'-Methylenebis(4-methyl-6-tert-butylphenol) (119-47-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

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Nickel, (1-butanamine)[[2,2'-thiobis[4-(1,1,3,3-tetramethylbutyl)phenolato]](2)-O,O',S]- (14516-71-3)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Benzene, 1,2,4-trimethyl- (95-63-6)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Listed on SARA Section 313 (Specific toxic chemical listings)	
SARA Section 313 - Emission Reporting	1.0 %
Xylenes (o-, m-, p- isomers) (1330-20-7)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Listed on SARA Section 313 (Specific toxic chemical listings)	
RQ (Reportable Quantity, Section 304 of EPA's List of Lists):	100 lb
SARA Section 313 - Emission Reporting	1.0 %
Quartz (14808-60-7)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Hydrogen sulfide (7783-06-4)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Listed on SARA Section 302 (Specific toxic chemical listings)	
Listed on SARA Section 313 (Specific toxic chemical listings)	
SARA Section 302 Threshold Planning Quantity (TPQ)	500
SARA Section 313 - Emission Reporting	1.0 %
Solvent naphtha, petroleum, light aromatic (64742-95-6)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Talc (14807-96-6)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Cumene (98-82-8)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Listed on SARA Section 313 (Specific toxic chemical listings)	
EPA TSCA Regulatory Flag	T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA.
SARA Section 313 - Emission Reporting	1.0 %
US State Regulations	
Carbon black (1333-86-4)	
U.S. - California - Proposition 65 - Carcinogens List	WARNING: This product contains chemicals known to the State of California to cause cancer.
Quartz (14808-60-7)	
U.S. - California - Proposition 65 - Carcinogens List	WARNING: This product contains chemicals known to the State of California to cause cancer.
Attapulgite (12174-11-7)	
U.S. - California - Proposition 65 - Carcinogens List	WARNING: This product contains chemicals known to the State of California to cause cancer.
Cumene (98-82-8)	
U.S. - California - Proposition 65 - Carcinogens List	WARNING: This product contains chemicals known to the State of California to cause cancer.
Asphalt (8052-42-4)	
RTK - U.S. - Massachusetts - Right To Know List	
RTK - U.S. - New Jersey - Right to Know Hazardous Substance List	
RTK - U.S. - Pennsylvania - RTK (Right to Know) List	
Zinc oxide (1314-13-2)	
RTK - U.S. - Massachusetts - Right To Know List	

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RTK - U.S. - New Jersey - Right to Know Hazardous Substance List
RTK - U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
RTK - U.S. - Pennsylvania - RTK (Right to Know) List

Sulfur (7704-34-9)

RTK - U.S. - Massachusetts - Right To Know List
RTK - U.S. - New Jersey - Right to Know Hazardous Substance List
RTK - U.S. - Pennsylvania - RTK (Right to Know) List

Carbon black (1333-86-4)

RTK - U.S. - Massachusetts - Right To Know List
RTK - U.S. - New Jersey - Right to Know Hazardous Substance List
RTK - U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances
RTK - U.S. - Pennsylvania - RTK (Right to Know) List

Extracts, petroleum, heavy paraffinic distillate solvent (64742-04-7)

RTK - U.S. - Massachusetts - Right To Know List

1,3,5-Trimethylbenzene (108-67-8)

RTK - U.S. - Massachusetts - Right To Know List

Benzene, 1,2,4-trimethyl- (95-63-6)

RTK - U.S. - Massachusetts - Right To Know List
RTK - U.S. - New Jersey - Right to Know Hazardous Substance List
RTK - U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
RTK - U.S. - Pennsylvania - RTK (Right to Know) List

Xylenes (o-, m-, p- isomers) (1330-20-7)

RTK - U.S. - Massachusetts - Right To Know List
RTK - U.S. - New Jersey - Right to Know Hazardous Substance List
RTK - U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
RTK - U.S. - Pennsylvania - RTK (Right to Know) List

Quartz (14808-60-7)

RTK - U.S. - Massachusetts - Right To Know List
RTK - U.S. - New Jersey - Right to Know Hazardous Substance List
RTK - U.S. - Pennsylvania - RTK (Right to Know) List

Hydrogen sulfide (7783-06-4)

RTK - U.S. - Massachusetts - Right To Know List
RTK - U.S. - New Jersey - Right to Know Hazardous Substance List
RTK - U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
RTK - U.S. - Pennsylvania - RTK (Right to Know) List

Talc (14807-96-6)

RTK - U.S. - Massachusetts - Right To Know List
RTK - U.S. - New Jersey - Right to Know Hazardous Substance List
RTK - U.S. - Pennsylvania - RTK (Right to Know) List

Cumene (98-82-8)

RTK - U.S. - Massachusetts - Right To Know List
RTK - U.S. - New Jersey - Right to Know Hazardous Substance List
RTK - U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
RTK - U.S. - Pennsylvania - RTK (Right to Know) List

Canadian Regulations

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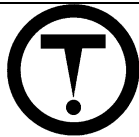
WHMIS Classification	Class B Division 3 - Combustible Liquid Class D Division 2 Subdivision A - Very toxic material causing other toxic effects Class D Division 2 Subdivision B - Toxic material causing other toxic effects
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Asphalt (8052-42-4)

Listed on the Canadian DSL (Domestic Substances List) inventory.

1-Propanamine, 3-(isodecyloxy)-, acetate (28701-67-9)

Listed on the Canadian DSL (Domestic Substances List) inventory.

Zinc oxide (1314-13-2)

Listed on the Canadian DSL (Domestic Substances List) inventory.

Listed on the Canadian Ingredient Disclosure List

WHMIS Classification Uncontrolled product according to WHMIS classification criteria

Sulfur (7704-34-9)

Listed on the Canadian DSL (Domestic Substances List) inventory.

WHMIS Classification Class B Division 4 - Flammable Solid

Stearic acid (57-11-4)

Listed on the Canadian DSL (Domestic Substances List) inventory.

Listed on the Canadian Ingredient Disclosure List

WHMIS Classification Uncontrolled product according to WHMIS classification criteria

Alcohols, C9-11-iso-, C10-rich (68526-85-2)

Listed on the Canadian DSL (Domestic Substances List) inventory.

Carbon black (1333-86-4)

Listed on the Canadian DSL (Domestic Substances List) inventory.

Listed on the Canadian Ingredient Disclosure List

WHMIS Classification Class D Division 2 Subdivision A - Very toxic material causing other toxic effects

Styrene-1,3-Butadiene polymer, hydrogenated (66070-58-4)

Listed on the Canadian DSL (Domestic Substances List) inventory.

Styrene-butadiene copolymer (9003-55-8)

Listed on the Canadian DSL (Domestic Substances List) inventory.

WHMIS Classification Uncontrolled product according to WHMIS classification criteria

1,3-Butadiene, 2-methyl-, homopolymer (9003-31-0)

Listed on the Canadian DSL (Domestic Substances List) inventory.

Extracts, petroleum, heavy paraffinic distillate solvent (64742-04-7)

Listed on the Canadian DSL (Domestic Substances List) inventory.

1,3,5-Trimethylbenzene (108-67-8)

Listed on the Canadian DSL (Domestic Substances List) inventory.

Listed on the Canadian Ingredient Disclosure List

WHMIS Classification Class B Division 3 - Combustible Liquid

2,2'-Methylenebis(4-methyl-6-tert-butylphenol) (119-47-1)

Listed on the Canadian DSL (Domestic Substances List) inventory.

Listed on the Canadian Ingredient Disclosure List

Nickel, (1-butanamine)[[2,2'-thiobis[4-(1,1,3,3-tetramethylbutyl)phenolato]](2-)-O,O',S]- (14516-71-3)

Listed on the Canadian DSL (Domestic Substances List) inventory.

Benzene, 1,2,4-trimethyl- (95-63-6)

Listed on the Canadian DSL (Domestic Substances List) inventory.

Listed on the Canadian Ingredient Disclosure List

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WHMIS Classification	Class B Division 3 - Combustible Liquid Class D Division 2 Subdivision A - Very toxic material causing other toxic effects Class D Division 2 Subdivision B - Toxic material causing other toxic effects
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Xylenes (o-, m-, p- isomers) (1330-20-7)

Listed on the Canadian DSL (Domestic Substances List) inventory.

WHMIS Classification	Class B Division 2 - Flammable Liquid Class D Division 2 Subdivision A - Very toxic material causing other toxic effects Class D Division 2 Subdivision B - Toxic material causing other toxic effects
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Quartz (14808-60-7)

Listed on the Canadian DSL (Domestic Substances List) inventory.

Listed on the Canadian Ingredient Disclosure List

WHMIS Classification	Class D Division 2 Subdivision A - Very toxic material causing other toxic effects
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Hydrogen sulfide (7783-06-4)

Listed on the Canadian DSL (Domestic Substances List) inventory.

Listed on the Canadian Ingredient Disclosure List

WHMIS Classification	Class A - Compressed Gas Class B Division 1 - Flammable Gas Class D Division 1 Subdivision A - Very toxic material causing immediate and serious toxic effects Class D Division 2 Subdivision B - Toxic material causing other toxic effects
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Solvent naphtha, petroleum, light aromatic (64742-95-6)

Listed on the Canadian DSL (Domestic Substances List) inventory.

WHMIS Classification	Class B Division 3 - Combustible Liquid Class D Division 2 Subdivision B - Toxic material causing other toxic effects
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Talc (14807-96-6)

Listed on the Canadian DSL (Domestic Substances List) inventory.

WHMIS Classification	Class D Division 2 Subdivision A - Very toxic material causing other toxic effects
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Cumene (98-82-8)

Listed on the Canadian DSL (Domestic Substances List) inventory.

Listed on the Canadian Ingredient Disclosure List

WHMIS Classification	Class B Division 2 - Flammable Liquid Class D Division 2 Subdivision A - Very toxic material causing other toxic effects
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Coal, anthracite (8029-10-5)

WHMIS Classification	Class D Division 2 Subdivision B - Toxic material causing other toxic effects
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This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision date : 05/13/2015

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

Party Responsible for the Preparation of This Document

The Garland Company, Inc.
3800 East 91st Street
Cleveland, Ohio 44105-2197
T-800-762-8225

This information is based on our knowledge as of the Revision Date and is intended to describe the product only for the purposes of health, safety, and environmental requirements as of the Revision Date. It should not therefore be construed as guaranteeing any specific property of the product nor as providing any warranty, expressed or implied. The user assumes all responsibility, liability, risk of loss, damage, or expense arising out of, or in any way connected with, the handling, storage, use, or disposal of the product.

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North America GHS US 2015 & WHMIS