

Legato Liquid Lineoleum Component B



Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).
Date of Issue: 01/19/2021 Version: 1.0

SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product Form: Substance

Product Name: Legato Liquid Lineoleum Component B

CAS-No.: 9016-87-9

1.2. Intended Use of the Product

Hardener; Polyurethane: component; flame retardant; Research and development

1.3. Name, Address, and Telephone of the Responsible Party

Company

Mannington Mills, Inc.

P.O. Box 30 - Route 45

75 Mannington Mills Road

Salem, New Jersey 08079

General Information: (856) 935-3000

1.4. Emergency Telephone Numbers

Emergency Number : Product/Medical Emergency Phone Number (24 Hours): (866) 359-5602 Transport Emergency: Within the U.S. - CHEMTREC: (800) 424-9300 Outside the U.S. - CHEMTREC: +1-703-527-3887

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

GHS-US/CA Classification

Acute Tox. 4 (Inhalation:dust,mist)	H332
Skin Irrit. 2	H315
Eye Irrit. 2A	H319
Resp. Sens. 1	H334
Skin Sens. 1	H317
Carc. 2	H351
STOT SE 3	H335
STOT RE 2	H373

Full text of hazard classes and H-statements : see section 16

2.2. Label Elements

GHS-US/CA Labeling

Hazard Pictograms (GHS-US/CA) :



Signal Word (GHS-US/CA) :

Danger

Hazard Statements (GHS-US/CA) :

- H315 - Causes skin irritation.
 - H317 - May cause an allergic skin reaction.
 - H319 - Causes serious eye irritation.
 - H332 - Harmful if inhaled.
 - H334 - May cause an allergy or asthma symptoms or breathing difficulties if inhaled.
 - H335 - May cause respiratory irritation.
 - H351 - Suspected of causing cancer.
 - H373 - May cause damage to organs through prolonged or repeated exposure.
- Precautionary Statements (GHS-US/CA)** :
- P201 - Obtain special instructions before use.
 - P202 - Do not handle until all safety precautions have been read and understood.
 - P260 - Do not breathe vapors, mist, or spray.
 - P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.
 - P271 - Use only outdoors or in a well-ventilated area.

Legato Liquid Lineoleum Component B

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).

P272 - Contaminated work clothing should not be allowed out of the workplace.
P280 - Wear protective gloves, protective clothing, and eye protection.
P284 - [In case of inadequate ventilation] wear respiratory protection.
P302+P352 - IF ON SKIN: Wash with plenty of water.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
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/attention if you feel unwell.
P321 - Specific treatment (see section 4 on this SDS).
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P342+P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P405 - Store locked up.
P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations.

2.3. Other Hazards

Exposure may aggravate pre-existing eye, skin, or respiratory conditions. Hazardous polymerization may occur.

2.4. Unknown Acute Toxicity (GHS-US/CA)

No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance

Name : Legato Liquid Lineoleum Component B

CAS-No. : 9016-87-9

Name	Synonyms	Product Identifier	% *	GHS Ingredient Classification
Isocyanic acid, polymethylenepolyphenylene ester	Polymethylene polyphenylene isocyanate / Polymeric diphenylmethane diisocyanate / Polymeric MDI / Polymethylene polyphenyl isocyanate / Polymethylenepolyphenylene isocyanate / Diphenylmethane diisocyanate / Methylene diphenyl diisocyanate (polymeric) / Isocyanuric acid polymethylene polyphenyl isocyanate / Polymethylene polyphenylisocyanate / PMDI / PAPI / Methylene bisphenyl diisocyanate, polymer / Polymeric methylene diphenyl diisocyanate / Polymethylenepolyphenyl polyisocyanate	(CAS-No.) 9016-87-9	100	Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 Carc. 2, H351 STOT SE 3, H335 STOT RE 2, H373

Full text of H-phrases: see section 16

3.2. Mixture

Not applicable

*Percentages are listed in weight by weight percentage (w/w%) for liquid and solid ingredients. Gas ingredients are listed in volume by volume percentage (v/v%).

SECTION 4: FIRST AID MEASURES

4.1. Description of First-aid Measures

Legato Liquid Lineoleum Component B

Safety Data Sheet

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

Inhalation: When symptoms occur: go into open air and ventilate suspected area. Remove to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention.

Skin Contact: Remove contaminated clothing. Immediately drench affected area with water for at least 15 minutes. Obtain medical attention if irritation/rash develops or persists. If exposed or concerned: Get medical advice/attention.

Eye Contact: Immediately rinse with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

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

4.2. Most Important Symptoms and Effects Both Acute and Delayed

General: May cause respiratory irritation. May cause damage to organs through prolonged or repeated exposure. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Skin sensitization. Causes skin irritation. Suspected of causing cancer. Harmful if inhaled. Causes serious eye irritation.

Inhalation: Irritation of the respiratory tract and the other mucous membranes. Exposure may produce cough, mucous secretions, shortness of breath, chest tightness or other symptoms indicative of an allergic/sensitization reaction. Inhalation is likely to cause adverse health effects including but not limited to: irritation, difficulty breathing, and unconsciousness.

Skin Contact: May cause an allergic skin reaction. Redness, pain, swelling, itching, burning, dryness, and dermatitis.

Eye Contact: May cause moderate irritation, including burning sensation, tearing, redness or swelling.

Ingestion: Ingestion may cause adverse effects.

Chronic Symptoms: Suspected of causing cancer. May cause damage to organs (Respiratory system.) through prolonged or repeated exposure.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Carbon dioxide, dry chemical, foam. Sand.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not considered flammable but may burn at high temperatures.

Explosion Hazard: Product is not explosive.

Reactivity: Reacts violently with hot water: pressure rise and possible bursting of container. Reacts slowly with water (moisture): release of harmful/irritant gases/vapors (carbon dioxide) and release of carcinogenic products. Polymerizes on exposure to temperature rise: pressure build-up may cause closed container to burst. On heating: release of toxic/combustible gases/vapors (hydrogen cyanide). On burning: release of toxic and corrosive gases/vapours (nitrous vapours, carbon monoxide - carbon dioxide). Violent polymerisation on exposure to (strong) bases and on exposure to (some) metals: pressure rise and possible bursting of container. Violent exothermic reaction on exposure to (strong) acids, alcohols and amines.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers.

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

Hazardous Combustion Products: Carbon oxides (CO, CO₂). Nitrous fumes. Hydrogen cyanide.

5.4. Reference to Other Sections

Refer to Section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Do not breathe vapor, mist or spray. Do not get in eyes, on skin, or on clothing.

6.1.1. For Non-Emergency Personnel

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

Emergency Procedures: Evacuate unnecessary personnel.

6.1.2. For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Legato Liquid Lineoleum Component B

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).

Emergency Procedures: Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit. Ventilate area.

6.2. Environmental Precautions

Prevent entry to sewers and public waters.

6.3. Methods and Materials for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. As an immediate precautionary measure, isolate spill or leak area in all directions. Ventilate area.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

6.4. Reference to Other Sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Precautions for Safe Handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes, on skin, or on clothing. Do not breathe vapors, mist, spray. Use only outdoors or in a well-ventilated area.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations.

Storage Conditions: Keep container closed when not in use. Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Store locked up/in a secure area.

Incompatible Materials: Strong acids, strong bases, strong oxidizers. Water. Metals. Amines.

7.3. Specific End Use(s)

Hardener; Polyurethane: component; flame retardant; Research and development

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), OSHA (PEL), or Canadian provincial governments.

Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9)		
Alberta	OEL TWA (mg/m ³)	0.07 mg/m ³
Alberta	OEL TWA (ppm)	0.005 ppm

8.2. Exposure Controls

Appropriate Engineering Controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed. Gas detectors should be used when toxic gases may be released.

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



Materials for Protective Clothing: Chemically resistant materials and fabrics.

Hand Protection: Wear protective gloves.

Eye and Face Protection: Chemical safety goggles.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

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

Legato Liquid Lineoleum Component B

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State	: Liquid
Appearance	: Dark amber
Odor	: Stuffy, mild, characteristic
Odor Threshold	: 0.4 ppm
pH	: Not available
Evaporation Rate	: Not available
Melting Point	: -24 °C (-11.2 °F)
Freezing Point	: < 10 °C (<50 °F)
Boiling Point	: 200 °C (392 °F) (at 5 mmHg)
Flash Point	: > 205 °C (401 °F)
Auto-ignition Temperature	: > 300 °C (572 °F)
Decomposition Temperature	: 329 °C (624.2 °F)
Flammability (solid, gas)	: Not applicable
Lower Flammable Limit	: Not available
Upper Flammable Limit	: Not available
Vapor Pressure	: < 0.0001 hPa @ 20 °C (68 °F)
Relative Vapor Density at 20°C	: 8.6 (air = 1)
Relative Density	: Not available
Density	: 1240 kg/m ³
Specific Gravity	: Not available
Solubility	: Reacts with water. Insoluble in water. Substance sinks in water. Soluble in acetone. Soluble in nitrobenzene. Soluble in halogenated hydrocarbons. Soluble in kerosene.
Partition Coefficient: N-Octanol/Water	: Not available
Viscosity	: Not available

9.1. Other Information

VOC content	: 0 %
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SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity: Reacts violently with hot water: pressure rise and possible bursting of container. Reacts slowly with water (moisture): release of harmful/irritant gases/vapors (carbon dioxide) and release of carcinogenic products. Polymerizes on exposure to temperature rise: pressure build-up may cause closed container to burst. On heating: release of toxic/combustible gases/vapors (hydrogen cyanide). On burning: release of toxic and corrosive gases/vapors (nitrous vapors, carbon monoxide - carbon dioxide). Violent polymerisation on exposure to (strong) bases and on exposure to (some) metals: pressure rise and possible bursting of container. Violent exothermic reaction on exposure to (strong) acids, alcohols and amines.

10.2. Chemical Stability: Stable under recommended handling and storage conditions (see section 7).

10.3. Possibility of Hazardous Reactions: Hazardous polymerization may occur on contact with incompatible materials or in the presence of heat.

10.4. Conditions to Avoid: Direct sunlight, extremely high or low temperatures, and incompatible materials.

10.5. Incompatible Materials: Strong acids, strong bases, strong oxidizers. Water. Metals. Amines.

10.6. Hazardous Decomposition Products: None expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on Toxicological Effects - Product

Acute Toxicity (Oral): Not classified

Acute Toxicity (Dermal): Not classified

Acute Toxicity (Inhalation): Harmful if inhaled.

LD50 and LC50 Data:

Legato Liquid Lineoleum Component B (9016-87-9)	
ATE US/CA (dust, mist)	1.50 mg/l/4h

Legato Liquid Lineoleum Component B

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).

Skin Corrosion/Irritation: Causes skin irritation.

Eye Damage/Irritation: Causes serious eye irritation.

Respiratory or Skin Sensitization: May cause an allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.

Germ Cell Mutagenicity: Not classified

Carcinogenicity: Suspected of causing cancer.

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

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): May cause respiratory irritation.

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Irritation of the respiratory tract and the other mucous membranes. Exposure may produce cough, mucous secretions, shortness of breath, chest tightness or other symptoms indicative of an allergic/sensitization reaction. Inhalation is likely to cause adverse health effects including but not limited to: irritation, difficulty breathing, and unconsciousness.

Symptoms/Injuries After Skin Contact: May cause an allergic skin reaction. Redness, pain, swelling, itching, burning, dryness, and dermatitis.

Symptoms/Injuries After Eye Contact: May cause moderate irritation, including burning sensation, tearing, redness or swelling.

Symptoms/Injuries After Ingestion: Ingestion may cause adverse effects.

Chronic Symptoms: Suspected of causing cancer. May cause damage to organs (Respiratory system.) through prolonged or repeated exposure.

11.2. Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9)	
LD50 Oral Rat	49000 mg/kg
LD50 Dermal Rat	> 9400 mg/kg
LD50 Dermal Rabbit	> 9.4 g/kg
ATE US/CA (gas)	4,500.00 ppmV/4h
ATE US/CA (vapors)	11.00 mg/l/4h
ATE US/CA (dust, mist)	1.50 mg/l/4h
Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9)	
IARC Group	3

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecology - General: Not classified.

12.2. Persistence and Degradability

Legato Liquid Lineoleum Component B (9016-87-9)	
Persistence and Degradability	Not established.

12.3. Bioaccumulative Potential

Legato Liquid Lineoleum Component B (9016-87-9)	
Bioaccumulative Potential	Not established.

12.4. Mobility in Soil Not available

12.5. Other Adverse Effects

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste Disposal Recommendations: Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations.

Ecology - Waste Materials: Avoid release to the environment.

Legato Liquid Lineoleum Component B

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).

SECTION 14: TRANSPORT INFORMATION

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

14.1. In Accordance with DOT Not regulated for transport

14.2. In Accordance with IMDG Not regulated for transport

14.3. In Accordance with IATA Not regulated for transport

14.4. In Accordance with TDG Not regulated for transport

SECTION 15: REGULATORY INFORMATION

15.1. US Federal Regulations

Legato Liquid Lineoleum Component B (9016-87-9)	
SARA Section 311/312 Hazard Classes	Health hazard - Specific target organ toxicity (single or repeated exposure) Health hazard - Respiratory or skin sensitization Health hazard - Skin corrosion or Irritation Health hazard - Serious eye damage or eye irritation Health hazard - Carcinogenicity Health hazard - Acute toxicity (any route of exposure)
Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
EPA TSCA Regulatory Flag	XU - XU - indicates a substance exempt from reporting under the Chemical Data Reporting Rule, (40 CFR 711).
SARA Section 313 - Emission Reporting	1 %

15.2. US State Regulations

Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9)
U.S. - New Jersey - Right to Know Hazardous Substance List

15.3. Canadian Regulations

Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9)
Listed on the Canadian DSL (Domestic Substances List)

Legato Liquid Lineoleum Component B

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).

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

Date of Preparation or Latest : 01/19/2021

Revision

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada's Hazardous Products Regulations (HPR) SOR/2015-17.

GHS Full Text Phrases:

Acute Tox. 4 (Inhalation)	Acute toxicity (inhalation) Category 4
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Carc. 2	Carcinogenicity Category 2
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Resp. Sens. 1	Respiratory sensitization, Category 1
Skin Irrit. 2	Skin corrosion/irritation Category 2
Skin Sens. 1	Skin sensitization, Category 1
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H332	Harmful if inhaled
H334	May cause an allergy or asthma symptoms or breathing difficulties if inhaled
H335	May cause respiratory irritation
H351	Suspected of causing cancer
H373	May cause damage to organs through prolonged or repeated exposure

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

NA GHS SDS 2015 (Can, US)