



SAFETY DATA SHEET 2168

Rev. 4, 8/26/2022

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: OlyBond500 Winter Part 1 – Bag In Box, SpotShot Cartridges, Drums
Supplier: GAF. 24-hour Emergency Response Number:
1 Campus Drive Chemtrec: 800-424-9300
Parsippany, NJ 07054
USA
Phone: 1-877-GAF-ROOF

Product Use(s): One component of a two-component polyurethane system

2. HAZARDS IDENTIFICATION

Classifications: Acute Toxicity, Inhalation: Hazard Category 4
Respiratory Sensitization: Hazard Category 1
Skin Sensitization: Hazard Category 1
Skin Irritation: Hazard Category 2
Eye Irritation: Hazard Category 2B
Reproductive Toxicity Category 2
Specific Target Organ Toxicity, Single Exposure: Hazard Category 3
Specific Target Organ Toxicity, Repeated Exposure: Hazard Category 2

Symbols:



Signal Word: Danger

Hazard Statements: May be harmful if inhaled.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause respiratory irritation.
May cause an allergic skin reaction.
Causes eye and skin irritation.
Suspected of damaging fertility or the unborn child.
May cause damage to the respiratory system and/or skin through prolonged or repeated exposure.

Precautionary Statements: Obtain, read and follow all safety instructions before use.
 Do not breathe mist, spray, or vapors.
 Use only outdoors or in a well-ventilated area.
 In case of inadequate ventilation wear proper respiratory protection.
 Wear protective gloves and eye/face protection.
 Wash hands and forearms thoroughly after handling.
 Contaminated work clothing must not be allowed out of the workplace.

IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms or if you feel unwell, call a doctor or Poison Control Center.

IF ON SKIN: Wash with plenty of soap/ water. Take off contaminated clothing and wash before reuse. Contaminated work clothing must not be allowed out of the workplace. If skin irritation or rash occurs, get medical advice/attention.

2. HAZARDS IDENTIFICATION (continued)

Precautionary Statements: (continued) **IF IN EYES:** Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.

Store locked up in a well-ventilated place. Keep container tightly closed.
 Dispose of contents/container in accordance with applicable regulations.

EMERGENCY OVERVIEW

Overexposure to components of this product by inhalation may cause respiratory irritation, asthma-like symptoms, and/or respiratory sensitization. The supplier has conducted an exposure assessment under representative working conditions and has determined that exposure in excess of the OSHA Permissible Exposure Limit is not likely when the product is used in an outdoor environment in accordance with instructions and safe work practices.

Skin contact may cause irritation and/or allergy-like symptoms, and eye contact may cause severe irritation. Avoid skin and eye contact, using proper personal protective equipment as needed. See Section #7 for recommendations on proper handling and work practices, and Section #8 for recommendations on personal protective equipment.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Ingredient</u>	<u>CAS Number</u>	<u>Percentage</u>	<u>Impurities</u>
Diphenylmethane Diisocyanate Isomers & Homologues	9016-87-9	90-100	None known
4,4'-Methylene Bisphenyl Isocyanate	101-68-8	30-50 (part of 9016-87-9)	None known
2,2,4-trimethyl-1,3-pentanediol diisobutyrate	6846-50-0	<10	None known

4. FIRST AID MEASURES

Eyes: Hold eyes open and flush with lukewarm water for at least 15 minutes. Seek immediate medical assistance.

Skin: Remove contaminated clothing. Wash affected areas with soap and water for at least five minutes. If irritation persists or a rash occurs, seek medical attention. Launder or dry-clean clothing before reuse.

Ingestion: DO NOT induce vomiting. If the subject is conscious, wash mouth and give 2 or more cups of milk or water. Seek immediate medical assistance. Do not attempt to give anything by mouth to an unconscious or convulsive person.

Inhalation: If signs and symptoms of respiratory toxicity are observed, remove subject from area and seek immediate medical attention. Keep the subject warm and at rest. If necessary, administer oxygen or perform artificial respiration if necessary and qualified personnel are available to do so.

Guidance for Physician or Poison Control Center: Inhalation exposure can irritate the respiratory tract and induce respiratory sensitization. Treatment of acute irritation and bronchial constriction should be done according to symptoms. Eye contact can cause moderate to severe irritation. Skin contact can cause moderate irritation, and may elicit an allergic response among susceptible individuals. Treat eye and skin irritation or injury according to symptoms. Extended medical treatment may be necessary for individuals exhibiting respiratory sensitization and/or skin disorders.

5. FIREFIGHTING MEASURES

Extinguishing Media: Water spray, carbon dioxide, dry chemical or chemical foam. DO NOT use water jet.

Fire and Explosion Hazards: The container may burst if exposed to elevated temperatures, spilling the contents. Material reacts slowly with water, releasing carbon dioxide which can cause pressure buildup and rupture of closed containers. If present in a fire or explosion, potential decomposition byproducts include carbon monoxide, oxides of nitrogen, isocyanates, hydrogen cyanide, hydrogen fluoride, and carbonyl halides

Firefighting Instructions: If fighting a fire in which this product is present, wear a self-contained breathing apparatus with full-facepiece operated in pressure-demand or other positive pressure mode.

6. ACCIDENTAL RELEASE MEASURES

Methods and Materials: Absorb spilled material with a sorbent such as sawdust or calcium silicate hydrate. When absorbed, transfer to an impervious container. Neutralize with solution of 8-10% sodium carbonate and 2% liquid detergent in water (10:1 ratio of solution to product). Do not seal container, as CO₂ will be released. Neutralize in a well-ventilated area for at least 48 hours before sealing containers for disposal.

Personal Precautions: Avoid contact with skin, eyes, and mucous membranes. Wear appropriate personal protective equipment (see Section #8) during cleanup and decontamination. Restrict unauthorized personnel during cleanup and disposal operations.

Environmental Precautions: Prevent spills from entering sewers or contaminating soil.

7. HANDLING AND STORAGE

Handling Precautions: Containers should be kept tightly closed to prevent contact with moisture and other chemicals. Do not reuse empty containers for any purpose. When handling the product, avoid contact with eyes, skin, and clothing, using protective equipment as needed. Do not use this product around children, and secure it away from children.

Work and Hygiene Practices: To prevent ingestion or contact following use of the product, wash hands and face before eating, drinking, applying cosmetics, or using tobacco. Remove contaminated clothing and protective equipment before entering eating/drinking areas.

Storage Precautions: Keep containers tightly sealed during storage. Store in a dry, well-ventilated area away from sources of ignition and incompatible materials (see Section #10). Recommended temperature range for storage is 55-85°F. (12.8-29.4°C.).

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Ingredients	<u>Ingredient</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>
Exposure Limits:	Diphenylmethane Diisocyanate Isomers & Homologues	None	None
	4,4'-Methylene Bisphenyl Isocyanate	0.02 ppm "C"	0.005 ppm TWA
	2,2,4-trimethyl-1,3- pentanediol diisobutyrate	None	None

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION (continued)

Ingredients Biological Limits:	<u>Ingredient</u>	<u>Biological Limit(s)</u>
	Diphenylmethane Diisocyanate Isomers & Homologues	No ACGIH BEIs or other biological limits
	4,4'-Methylene Bisphenyl Isocyanate	No ACGIH BEIs or other biological limits
	2,2,4-trimethyl-1,3- pentanediol diisobutyrate	No ACGIH BEIs or other biological limits

Engineering Controls: Use appropriate ventilation (dilution or local exhaust) whenever natural ventilation is restricted or inadequate to maintain concentrations of all components within their applicable standards.

Eye/Face Protection: Wear eye protection adequate to prevent eye contact with the product. Plastic-frame spectacles with side shields, chemical goggles, or a face shield are recommended. Do not wear contact lenses when working with this product.

Skin Protection: Wear protective gloves and clothing to prevent skin irritation or injury from contact with the product. Glove materials known to be effective against permeation by isocyanates include butyl rubber, nitrile rubber, and polychloroprene.

Respiratory Protection: If an exposure level to a component exceeds an applicable standard, use a NIOSH-approved respirator of a class and configuration effective for protection from the component(s) generated. Where exposures exceed the OSHA *Permissible Exposure Limit (PEL)*, an airline respirator or self-contained breathing apparatus (SCBA) is recommended. Consult OSHA regulations (29CFR1910.134) and/or American National Standard Z88.2 (ANSI, New York, NY 10036, USA) for guidance.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Brown liquid
Odor: aromatic
Odor threshold: not determined
pH: not applicable
Melting point: not determined.
Freezing point: not determined
Boiling point: $\geq 200^{\circ}\text{F}/93^{\circ}\text{C}$.
Boiling range: not determined
Flash Point: approx. $484^{\circ}\text{F}/220^{\circ}\text{C}$.
Autoignition Point: not determined
Flammability Class: IIIB
Lower Explosive Limit: not determined
Upper Explosive Limit: not determined
Vapor pressure: not determined
Vapor density: not determined
Evaporation Rate: not determined
VOCs (per EPA Method 24): 50 g/L
Relative density (H₂O): approx. 1.22
Solubility (H₂O): reactive
Oil-water partition coefficient: not determined
Decomposition temperature: not determined
Viscosity: 300 cps

10. STABILITY AND REACTIVITY

Stability: Stable
Reactivity: May react with water and incompatible materials
Hazardous Polymerization: May occur at temperatures $>392^{\circ}\text{F}/200^{\circ}\text{C}$.
Risk of Dangerous Reactions: None reasonably foreseeable
Incompatible Materials: Water, alcohols, acids, alkalis, and amines
Potential Decomposition Byproducts: Carbon monoxide, carbon dioxide, nitrogen oxides, isocyanates, and hydrogen cyanide

11. TOXICOLOGICAL INFORMATION

<u>Ingredients Toxicology Data</u>	<u>LD₅₀ Oral</u>	<u>LD₅₀ Dermal</u>	<u>LC₅₀</u>
Diphenylmethane Diisocyanate Isomers & Homologues	>10,000 mg/kg (rat)	>9400 mg/kg (rabbit)	0.49 mg/l 4 hour (rat)
4,4'-Methylene Bisphenyl Isocyanate	>10,000 mg/kg (rat)	>9400 mg/kg (rabbit)	2.24 mg/m ³ for 1 hour (rat)
2,2,4-trimethyl-1,3-pentanediol diisobutyrate	>2,000 mg/kg (rat)	>2,000 mg/kg (rabbit)	>0.12 mg/L/6H

Primary Route(s) of Entry: Inhalation; ingestion

Eye Hazards: This product may cause eye irritation.

Skin Hazards: This product may cause mild to moderate skin irritation and has the potential to cause skin sensitization among susceptible individuals.

Ingestion Hazards:	The product is not classified as toxic by ingestion, but ingestion may cause nausea, vomiting, and/or gastrointestinal irritation.
Inhalation Hazards:	Inhalation of toxicologically-significant quantities of ingredients is unlikely when the product is used in a well-ventilated area and in accordance with instructions.
Symptoms Related to Overexposure:	Inhalation overexposure to isocyanates may cause respiratory irritation, breathing difficulties, and asthma-like symptoms.
Delayed Effects from Long Term Overexposure:	Long-term inhalation overexposure to this product may result in respiratory sensitization, which may be irreversible.
Carcinogenicity:	A single inhalation study exposing rats to aerosolized polymeric 4,4'-Methylene Bisphenyl Isocyanate identified a single malignant pulmonary tumor among 60 animals exposed at the highest exposure level. Observations of pulmonary fibrosis and other pathological anomalies in the test animals precluded definitive determination as to the cause(s) of the tumor. Epidemiological studies of humans occupationally exposed to the isocyanates in this product have found no strong association or consistent pattern with respect to carcinogenicity.
Germ Cell Mutagenicity:	No ingredients have been determined to be germ cell mutagens.
Reproductive Toxicity:	No ingredients have been determined to be damaging to fertility or to the unborn child.

11. TOXICOLOGICAL INFORMATION (continued)

Acute Toxicity Estimates:	LD ₅₀ (oral): >10,000 mg/kg
	LD ₅₀ (dermal): >94,000 mg/kg
	LC ₅₀ : 2.24 mg/L/1 hr as aerosol

12. ECOLOGICAL INFORMATION

Diphenylmethane Diisocyanate, Isomers and Homologues:	Aquatic Toxicity to Fish: LC ₅₀ >1,000 mg/l. for 96 h. (zebra fish) Aquatic Toxicity to Invertebrates: EC ₅₀ >1,000 mg/l. for 24 h. (daphnia) Aquatic Toxicity to Plants: EC ₅₀ >1,640 mg/l. for 72 h. (algae) Aquatic Toxicity to Microorganisms: EC ₅₀ >100 mg/l. for 3 h. (bacteria) Toxicity to Terrestrial Organisms: NOEC=1,000 mg/kg for 14 d. (worms) No data available for Persistence and Degradability, Bioaccumulation Potential, or Mobility in Soil.
2,2,4-trimethyl-1,3-pentanediol diisobutyrate	Aquatic Toxicity to Fish: LC50 = >6 mg/l. for 96 h. (limit of solubility) Aquatic Toxicity to Invertebrates: EC50 = >1.46 mg/l. for 48 h. (daphnia) (limit of solubility) Chronic Toxicity to Invertebrates: NOEC 0.7 mg/L/21d (daphnia) Readily biodegradable, not bioaccumulative
Ozone Depletion Potential:	This product neither contains nor is manufactured with any ingredients known to deplete the ozone layer.

13. DISPOSAL CONSIDERATIONS

Do not discharge waste product into sanitary or storm sewers or allow it to contaminate soil. Empty containers should be decontaminated prior to disposal. Consult applicable Federal, State/Provincial, and local regulations.

14. TRANSPORTATION INFORMATION

Transport of the product is not regulated by USDOT, TDG (Canada), IATA, or IMO.

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA Information: All ingredients of this product are listed in the TSCA Registry.

SARA Hazard Classes: Refer to Section 2 for the OSHA Hazard Classification

EPCRA Section 313 Notification: This product contains these ingredients in concentrations $\geq 1\%$ (for carcinogens $\geq 0.1\%$) regulated under Section 313 of the *Emergency Planning and Community Right-To-Know Act* of 1986 or 40 CFR 372:

1. 4,4'-Methylene Bisphenyl Isocyanate (CASRN 101-68-8)
2. Polymeric Isocyanates (CASRN 9016-87-9)

CERCLA Information: Under requirements of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 4,4'-Methylene Bisphenyl Isocyanate (CASRN 101-68-8) has a Reportable Quantity of 5,000 lbs. Any spill or release above this RQ must be reported to the National Response Center (800-424-8802).

Canadian Regulatory Information

This product has been classified in accordance with Canada's *Hazardous Products Regulations* (SOR/DORS/2015-15).

16. OTHER INFORMATION

Hazardous Materials Information System (HMIS III) Ratings (Legend):	<u>Health</u> 2* (moderate hazard indicating potential for chronic effects)	<u>Flammability</u> 1 (slight hazard)	<u>Physical Hazard</u> 0 (minimal hazard)	<u>PPE</u> See Note
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Note regarding PPE: GAF recommends use of protective eyewear and skin protection (Personal Protection Index "B") as standard PPE for the anticipated conditions of use of this product. However, HMIS recommends that its ratings be used only in conjunction with a fully implemented HMIS program, and that specific PPE codes should be created by the user, who is familiar with the actual conditions under which the product is used. We cannot anticipate every condition of the product's use, and it is the user's responsibility to evaluate the hazards pertinent to its specific operations, and to determine the specific PPE required.

National Fire Protection Association (NFPA) Ratings:	<u>Health</u> 2	<u>Flammability</u> 2	<u>Reactivity</u> 1
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Revision Information: Date of Prior SDS: 1/22/2019

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