



SECTION 1: PRODUCT AND COMPANY INFORMATION

PRODUCT NAME: SpotShot Part 1 (Dark Brown)
TRADE NAME: N/A
CHEMICAL NAME / SYNONYM: Polymeric MDI
CHEMICAL FAMILY: Polymethylene Polyphynylisocyanate
MANUFACTURER: GAF
ADDRESS: 1361 Alps Road, Wayne, NJ 07470
24-HOUR EMERGENCY PHONE (CHEMTREC): 800 – 424 – 9300
INFORMATION ONLY: 800 – 766 – 3411
PREPARED BY: Corporate EHS
APPROVED BY: Corporate EHS

SECTION 2: HAZARD IDENTIFICATION

NFPA and HMIS RATINGS:

	NFPA Hazard Rating		HMIS Hazard Rating
Health	2	Health	2
Flammable	1	Flammable	1
Reactive	1	Reactive	1
Special Hazards	-	Personal Protection	X

GHS LABEL ELEMENTS:

GHS CLASSIFICATION: Eye Irritant - Category 2A
Skin Irritant - Category 2
Skin Sensitizer - Category 1
Target Organ (SE) - Category 3
Target Organ (RE) - Category 2
Carcinogen - Category 2
Acute Toxicity - Category 4
Hazardous to the Aquatic Environment - Category 2



SIGNAL WORD: Danger

HAZARD STATEMENTS: May cause damage to organs through prolonged or repeated exposure
Causes skin irritation
Causes serious eye irritation
May cause an allergic reaction
May cause respiratory irritation
May cause allergy or asthma symptoms or breathing difficulties if inhaled
Harmful if inhaled
Toxic to aquatic life with long lasting effects

ADDITIONAL HAZARD IDENTIFICATION INFORMATION:

PRIMARY ROUTE OF EXPOSURE: Inhalation, Ingestion, Skin contact

SIGNS & SYMPTOMS OF EXPOSURE

EYES: May cause eye irritation. May result in corneal opacity (clouding of the eye surface).

SKIN: Can cause skin burns, irritation, and possible allergic reaction.

INGESTION: Harmful if swallowed. Can burn mouth, throat, and stomach. Gastrointestinal symptoms include nausea, vomiting and abdominal pain.

INHALATION: Inhalation of MDI vapors may cause irritation of the mucous membranes of the nose, throat and trachea, breathlessness, chest discomfort, difficult breathing and reduced pulmonary function.

ACUTE HEALTH HAZARDS: Individuals who have developed skin sensitization, these symptoms can develop as a result of contact with a very small amount of the liquid material.

CHRONIC HEALTH HAZARDS: As a result of previous repeated overexposures or a single large dose, certain individuals will develop isocyanate sensitization (chemical asthma) which will cause them to react to a later exposure to isocyanate at levels well below the PEL/TLV. These symptoms, which include chest tightness, wheezing, cough, shortness of breath, or asthmatic attack, could be immediate or delayed up to several hours after exposure. Chronic overexposure to isocyanates has also been reported to cause lung damage, including a decrease in lung function, which may be permanent. Sensitization may be either temporary or permanent. Prolonged contact can cause reddening, swelling, rash, scaling, or blistering. In those who have developed skin sensitization, these symptoms can develop as a result of contact with very small amounts of liquid material.

CARCINOGENICITY: Lung tumors have been observed in lab animals exposed to respirable aerosol droplets of MDI/polymerized MDI (6 mg/m³) for their

lifetime. Tumors occurred cocurrently with respiratory irritation and lung injury. Current exposure guidelines are expected to protect against these effects reported for MDI.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS #	%	OCCUPATIONAL EXPOSURE LIMITS		
			OSHA	ACGIH	OTHER
4, 4'-Diphenylmethane Diisocyanate	101-68-8	38	0.2 mg/m ³ ceiling	0.051 mg/m ³	0.05 mg/m ³
Polymeric MDI	9016-87-9	<55	NE	NE	NE
MDI Mixed Isomers	26447-40-5	10	NE	NE	NE

NE = Not Established

SECTION 4: FIRST AID MEASURES

FIRST AID PROCEDURES

EYES: After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get immediate medical attention.

SKIN: Remove contaminated clothing and shoes. Immediately wash exposed area with soap and water. Get medical attention immediately.

INHALATION: Move individual away from exposure and into fresh air. If not breathing, give artificial respiration. Get immediate medical attention.

INGESTION: If swallowed, immediately give 2 glasses of water. Do not induce vomiting. Contact a physician. Never give anything by mouth to an unconscious person. Get immediate medical attention.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS: There are no antidotes to counteract the effects of MDI. Care should be supportive and treatment should be based on the judgment of the physician in response to the action of the patient.

SECTION 5: FIRE FIGHTING PROCEDURES

SUITABLE EXTINGUISHING MEDIA: Water, Carbon dioxide, foam or Dry chemical

HAZARDOUS COMBUSTION Carbon dioxide and Carbon Monoxide.

PRODUCTS:**RECOMMENDED FIRE FIGHTING PROCEDURES:**

Wear full firefighting turn-out gear (full Bunker gear), and respiratory protection (SCBA).

UNUSUAL FIRE & EXPLOSION HAZARDS:

Reacts with water to form carbon dioxide gas, which may create excessive pressure in containers. At temperatures greater than 400° F material may polymerize causing pressure build up in closed containers. Explosive rupture is possible. Use cold water to cool containers exposed to fire. Reacts exothermically with polyol and alcohols. Reacts exothermically and possibly violently with acids, amines, and alkaline solutions.

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES: Evacuate non-emergency personnel to a safe area. Stop spill at source, dike area of spill to prevent spreading. Absorb spill with inert material such as dry sand or earth and place in a chemical waste container. Neutralize spill with mixture of 90% water, 3-8% ammonia and 2-7% detergent. Add at a 10 to 1 ratio and let stand for 48 hrs allowing CO₂ to escape.

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE:

Avoid extreme temperatures. Keep container closed when not in use. Store in a cool dry place, (60.1° F – 80.1° F). Shelf life is 18 months at 80.1° F.

OTHER PRECAUTIONS:

None.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS / VENTILATION:

Facilities storing or utilizing this material should be equipped with an eyewash and safety shower. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

RESPIRATORY PROTECTION:

If workplace exposure limit(s) of product or any component is exceeded, a NIOSH-approved respirator is advised in absence of proper environmental control. Engineering or administrative controls should be implemented to reduce exposure.

EYE PROTECTION:

Safety glasses should be worn.

SKIN PROTECTION:

Avoid contact with skin. Selection of specific PPE such as boots,

gloves, aprons, and full body suit will depend on operation.

OTHER PROTECTIVE EQUIPMENT: N/A

WORK HYGIENIC PRACTICES: N/A

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE & ODOR:	Dark brown liquid with an aromatic odor.		
FLASH POINT:	>428° F	LOWER EXPLOSIVE LIMIT:	No data
METHOD USED:	COC	UPPER EXPLOSIVE LIMIT:	No data
EVAPORATION RATE:	No data	BOILING POINT:	200° C @ 5 mm Hg
pH (undiluted product):	No data	MELTING POINT:	3° C
SOLUBILITY IN WATER:	Reacts with Water	SPECIFIC GRAVITY:	1.22 (Water = 1)
VAPOR DENSITY:	No data	PERCENT VOLATILE:	No data
VAPOR PRESSURE:	.00001 mm Hg @ 20° C	MOLECULAR WEIGHT:	No data
VOC WITH WATER (LBS/GAL):	No data	WITHOUT WATER (LBS/GAL):	No data

SECTION 10: STABILITY AND REACTIVITY

THERMAL STABILITY:

STABLE X

UNSTABLE

CONDITIONS TO AVOID (STABILITY):

Avoid moisture, acids, alcohols, alkalies, and amines.

INCOMPATIBILITY (MATERIAL TO AVOID):

Reacts with water, with formation of carbon dioxide. Risk of bursting with alcohols, acids, alkalies, amines. Risk of exothermic reaction. Risk of violent reaction. Contact with certain rubbers and plastics can cause brittleness of the substance with subsequent loss in strength.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:

Carbon monoxide, Hydrogen cyanide, nitrogen oxides, aromatic isocyanates, gases/vapors.

HAZARDOUS POLYMERIZATION:

May occur.

SECTION 11: TOXICOLOGICAL INFORMATION

**TOXICOLOGICAL
INFORMATION:****Acute oral toxicity**

LD 50/Rat: > 10,000 mg/kg

Acute inhalation toxicity

LD50/Rat: > 2.240 mg/1/1h

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: No information available.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: This product, as supplied, is not regulated as a hazardous waste by the U.S. Environmental Protection Agency (EPA) under Resource Conservation and Recovery Act (RCRA) regulations. Comply with state and local regulations for disposal.**RCRA HAZARD CLASS:** None.

SECTION 14: TRANSPORTATION INFORMATION

U.S. DOT TRANSPORTATION**PROPER SHIPPING NAME:** N/A**HAZARD CLASS:** N/A**ID NUMBER:** N/A**PACKING GROUP:** N/A**LABEL STATEMENT:** N/A**OTHER:** N/A

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

TSCA: This product and its components are listed on the TSCA 8(b) inventory.

CERCLA: 4, 4'-Diphenylmethane Diisocyanate (101-68-8)

SARA

311 / 312 HAZARD CATEGORIES: Acute Health Hazard; Chronic Health Hazard

313 REPORTABLE INGREDIENTS: 4, 4'-Diphenylmethane Diisocyanate (101-68-8) RQ 5000 lbs

CALIFORNIA PROPOSITION 65: This product contains a chemical known to the state of California to cause cancer and birth defects, or other reproductive harm.

Other state regulations may apply. Check individual state requirements. The following components appear on one or more of the following state hazardous substances lists:

Chemical Name	CAS #	CA	MA	MN	NJ	PA	RI
4, 4'-Diphenylmethane Diisocyanate	101-68-8	Yes	No	No	Yes	No	Yes
Polymeric MDI	9016-87-9	No	No	No	No	No	No
MDI Mixed Isomers	26447-40-5	No	No	No	No	No	No

SECTION 16: OTHER INFORMATION

ADDITIONAL COMMENTS: N/A

DATE OF PREVIOUS SDS: March 2011

CHANGES SINCE PREVIOUS SDS: GHS formatting changes.

This information relates to the specific material designated and may not be valid for such material used on combination with any other materials or in any process. Such information is to the best of our knowledge and belief accurate and reliable as of the date compiled. However, no representation, warranty or guarantee, expressed or implied, is made as to its accuracy, reliability, or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his particular use. We do not accept liability for any loss or damage that may occur from the use of this information. Nothing herein shall be construed as a recommendation for uses which infringe valid patents or as extending a license of valid patents.



SECTION 1: PRODUCT AND COMPANY INFORMATION

PRODUCT NAME: SpotShot Part 2 (Red)
TRADE NAME: N/A
CHEMICAL NAME / SYNONYM: Polyurethane System Resin Component
CHEMICAL FAMILY: N/A
MANUFACTURER: GAF
ADDRESS: 1361 Alps Road, Wayne, NJ 07470
24-HOUR EMERGENCY PHONE (CHEMTREC): 800 – 424 – 9300
INFORMATION ONLY: 800 – 766 – 3411
PREPARED BY: Corporate EHS
APPROVED BY: Corporate EHS

SECTION 2: HAZARD IDENTIFICATION

NFPA and HMIS RATINGS:

	NFPA Hazard Rating		HMIS Hazard Rating
	3		3
	1		1
	0		0
Special Hazards	-	Personal Protection	X

GHS LABEL ELEMENTS:

GHS CLASSIFICATION: Flammable Gas - Category 3
Eye Irritant - Category 2A
Skin Irritant - Category 2
Respiratory Irritant
Target Organ (SE) - Category 3
Target Organ (RE) - Category 1
Hazardous to the aquatic environment (chronic) - Category 2

GHS PICTOGRAMS:



SIGNAL WORD: Danger

HAZARD STATEMENTS:

Flammable gas
 Contains gas under pressure, may explode if heated
 Explosive with or without contact with air
 May cause cancer
 Toxic if inhaled
 Toxic if swallowed
 May cause damage to organs through prolonged or repeated exposure
 Causes skin irritation
 Serious eye irritation
 May cause genetic defects
 May cause an allergic reaction
 May cause respiratory irritation
 Harmful to the aquatic environment with long lasting effects

ADDITIONAL HAZARD IDENTIFICATION INFORMATION:

PRIMARY ROUTE OF EXPOSURE: Inhalation, Ingestion, Skin contact

SIGNS & SYMPTOMS OF EXPOSURE

EYES: May cause eye irritation.

SKIN: Not expected to be a skin irritant. A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts.

INGESTION: Harmful if swallowed.

INHALATION: Avoid breathing vapors or mists. Prolonged or excessive inhalation may cause respiratory tract irritation.

ACUTE HEALTH HAZARDS: N/A

CHRONIC HEALTH HAZARDS: N/A

CARCINOGENICITY:

Ethylene Oxide is classified as a Group 1 carcinogen (carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

1, 4 – Dioxane is classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

Acetaldehyde is classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS #	%	OCCUPATIONAL EXPOSURE LIMITS		
			OSHA	ACGIH	OTHER
Aniline	62-53-3	<0.1	5 ppm	2 ppm	NE
Ethylene Oxide	75-21-8	<0.1	1 ppm	1 ppm	<.1 ppm
Diethylene Glycol	111-46-6	<10	NE	NE	NE
Dipropylene Glycol	25265-71-8	<10	NE	NE	NE
1, 4 – Dioxane	123-91-1	<0.1	100 ppm	20 ppm	.1 ppm – ceiling 30-min
Acetaldehyde	75-07-0	<0.1	200 ppm	25 ppm – ceiling	NE

NE = Not Established

SECTION 4: FIRST AID MEASURES**FIRST AID PROCEDURES**

EYES: After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention if irritation develops or persists.

SKIN: Get medical attention if irritation develops or persists.

INHALATION: Move individual away from exposure and into fresh air. Get medical attention if irritation develops or persists.

INGESTION: Do not induce vomiting. Get immediate medical attention.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS: N/A

SECTION 5: FIRE FIGHTING PROCEDURES

SUITABLE EXTINGUISHING MEDIA: Water, Carbon dioxide, foam or dry chemical. Do not use a direct water stream.

HAZARDOUS COMBUSTION PRODUCTS: Carbon dioxide

RECOMMENDED FIRE FIGHTING Wear full firefighting turn-out gear (full Bunker gear), and

PROCEDURES: respiratory protection (SCBA).

UNUSUAL FIRE & EXPLOSION HAZARDS: N/A

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES: Stop spill at source, dike area of spill to prevent spreading. Absorb spill with inert material such as dry sand or earth and place in a chemical waste container.

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE: Avoid extreme temperatures. Keep container closed when not in use. Store in a cool dry place, (60.1° F – 80.1° F). Shelf life is 18 months at 80.1° F.

OTHER PRECAUTIONS: None.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS / VENTILATION: Local exhaust ventilation or other engineering controls may be needed to control airborne levels below recommended exposure limits.

RESPIRATORY PROTECTION: If workplace exposure limit(s) of product or any component is exceeded, a NIOSH-approved respirator is advised in absence of proper environmental control. Engineering or administrative controls should be implemented to reduce exposure.

EYE PROTECTION: Safety glasses should be worn.

SKIN PROTECTION: Selection of specific PPE such as boots, gloves, aprons, and full body suit will depend on operation.

OTHER PROTECTIVE EQUIPMENT: N/A

WORK HYGIENIC PRACTICES: Wash hands thoroughly after handling. Product produces slippery conditions.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

WASTE DISPOSAL METHOD: This product, as supplied, is regulated as a hazardous waste by the U.S. Environmental Protection Agency (EPA) under Resource Conservation and Recovery Act (RCRA) regulations. If discarded in its purchased form, this product is a RCRA hazardous waste. It is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or residue of the product remains classified a hazardous waste as per 40 CFR 261, Subpart C. State or local regulations may also apply if they differ from the federal regulation.

RCRA HAZARD CLASS: 1, 4 – Dioxane 123-91-1 RCRA Code: U108
Acetaldehyde 75-07-0 RCRA Code: U001
Ethylene Oxide 75-21-8 RCRA Code: U115

SECTION 14: TRANSPORTATION INFORMATION

U.S. DOT TRANSPORTATION

PROPER SHIPPING NAME: N/A
HAZARD CLASS: N/A
ID NUMBER: N/A
PACKING GROUP: N/A
LABEL STATEMENT: N/A
OTHER: N/A

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

TSCA: This product and its components are listed on the TSCA 8(b) inventory.

CERCLA: 1, 4 – Dioxane 123-91-1
Acetaldehyde 75-07-0

SARA

311 / 312 HAZARD CATEGORIES: Acute and Chronic Health Hazard

313 REPORTABLE INGREDIENTS: 1, 4 – Dioxane 123-91-1 100 lb
Acetaldehyde 75-07-0 1000lb

CALIFORNIA PROPOSITION 65: This product contains a chemical known to the state of California to cause cancer and birth defects, or other reproductive harm. Cancer:

Ethylene Oxide, Aniline, 1, 4 – Dioxane, Acetaldehyde.
 Reproductive: Ethylene Oxide.

Other state regulations may apply. Check individual state requirements. The following components appear on one or more of the following state hazardous substances lists:

Chemical Name	CAS #	CA	MA	MN	NJ	PA	RI
Aniline	62-53-3	Yes	Yes	Yes	Yes	No	Yes
Ethylene Oxide	75-21-8	Yes	Yes	Yes	Yes	Yes	Yes
Diethylene Glycol	111-46-6	No	No	No	No	No	Yes
Dipropylene Glycol	25265-71-8	No	No	No	No	No	No
1, 4 – Dioxane	123-91-1	Yes	Yes	Yes	Yes	Yes	Yes
Acetaldehyde	75-07-0	Yes	Yes	Yes	Yes	Yes	Yes

SECTION 16: OTHER INFORMATION

ADDITIONAL COMMENTS: N/A

DATE OF PREVIOUS SDS: March 2011

CHANGES SINCE PREVIOUS SDS: New MSDS

This information relates to the specific material designated and may not be valid for such material used on combination with any other materials or in any process. Such information is to the best of our knowledge and belief accurate and reliable as of the date compiled. However, no representation, warranty or guarantee, expressed or implied, is made as to its accuracy, reliability, or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his particular use. We do not accept liability for any loss or damage that may occur from the use of this information. Nothing herein shall be construed as a recommendation for uses which infringe valid patents or as extending a license of valid patents.