



SAFETY DATA SHEET

SECTION 1- IDENTIFICATION

1.1 Product Identifier

Product Name: GAF 2-Part Roofing Adhesive Part B

1.2 Relevant identified uses of the substance or mixture and uses advised against:

General Use Low pressure polyurethane roof tile adhesive, Side-B Component, for PROFESSIONAL USE ONLY

Company name GAF
1 Campus Drive
Parsippany, NJ 07054 USA
1-800-766-3411

1.3 Emergency telephone numbers:

In the U.S.A CHEMTREC (24 hours) 1-800-424-9300
International CHEMTREC (24 hours) 1-703-527-3887

SECTION 2- HAZARDS IDENTIFICATION

2.1 Classification of substance or mixture

Product definition: Mixture

Classification: Pressurized Gas
Serious Eye Damage/Irritation: Category 1.
Skin Corrosion/Irritation: Category 1C.
Specific Target Organ Toxicity (repeated exposure): Category 2

2.2 Label elements

Labeling (Regulation (EC) No 1272/2008)

Hazard Symbols:



Signal Word: DANGER

Hazard Statements:

H280 Contains gas under pressure, may explode if heated
H314 Causes severe skin burns and eye damage
H373 May cause damage to organs through prolonged or repeated exposure

Prevention:

P260 Do not breathe dust/fume/gas/mist/vapors/spray
P264 Wash thoroughly after handling
P270 Do not eat, drink, or smoke when using this product
P280 Wear eye/face protection
P285 In case of inadequate ventilation: wear respiratory protection

Response:

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P302+P361+P353 IF ON SKIN: Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308+P311 IF exposed: Call a POISON CENTER or doctor/physician

Disposal:

P501 Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

2.3 Hazards otherwise not classified

May cause chemical gastrointestinal burns.

14% of the mixture consists of ingredients of unknown acute oral toxicity

SECTION 3-COMPOSITION/ INFORMATION ON INGREDIENTS

3.1 Substances

Not applicable

3.2 Mixtures

Chemical characterization (preparation):

% by Weight	Ingredient	CAS No.
10-20	1,1,1,2- Tetrafluoroethane	811-97-2
<10	Butane-1,4'-diol	110-63-4
<10	Polyetheramine	9046-10-0
<10	Nitrogen	7727-37-9
<5	Diethylene Glycol	111-46-6
<5	Diehtylmethylbenzenediamine	68479-98-1
<5	Hexadec-1-ene	629-73-2

SECTION 4- FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation: Remove person to fresh air. Get medical attention.

Eye: Immediately flush eyes with large amounts of water for at least 15 minutes, holding the eyes open with fingers and occasionally lifting the upper and lower lids. Use lukewarm water if possible. If present and easy to do, remove contact lenses. If irritation persists, get medical attention.

Skin: Flush skin with large amounts of water while removing contaminated clothing. Gently wipe product from skin with a damp cloth and continue rinsing for 15 minutes. Wash clothing before reuse. Call a physician if irritation persists.

Ingestion: If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11.1. Information on toxicological effects.

4.3 Notes to the physician

If case of an accident or if you feel unwell, seek medical advice immediately (show label or SDS if possible). Exposure may increase myocardial irritability. Do not administer sympathomimetic drugs unless absolutely necessary.

SECTION 5- FIRE FIGHTING MEASURES

5.1 Extinguishable media

Suitable methods of extinction: Use dry chemical, carbon dioxide, alcohol resistant foams and water spray

Unsuitable methods of extinction: None

5.2 Special hazards arising from the substance or mixture

Cylinders may explode due to the buildup of pressure when exposed to extreme heat. Highly toxic gases may be generated by thermal decomposition or combustion. Overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent or may be delayed. Hazardous decomposition products: Carbon monoxide, Carbon dioxide, Aldehydes, Oxides of Nitrogen.

5.3 Advice for firefighters

Keep upwind of fire. Wear full fire-fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA). Use water spray to keep fire-exposed containers cool.

SECTION 6- ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear personal protective equipment recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice.

6.2 Environmental precautions

Avoid dispersal of spilled material or run-off and prevent contact with soil and entry into drains, sewers or waterways.

6.3 Methods and materials for containment and cleaning up

Cover drains and contain spill. Cover spilled material with a large quantity of inert absorbent. Collect material and place into an approved, open-head metal container. Clean contaminated area with soap and water.

6.4 Reference to other sections

For indications about waste treatment, see Section 13

SECTION 7- HANDLING AND STORAGE

7.1 Precautions for safe handling

For industrial or professional use only. Observe label precautions. Do not breathe dust/fume//gas/mist/vapors/spray. Wear all appropriate protective equipment specified in Section 8. Keep containers closed when not in use.

Advice on protection against fire and explosion

Chemicals under pressure. Exposure to high temperatures can cause containers to rupture or explode.

7.2 Conditions for safe storage, including any incompatibilities

Store in a dry, well-ventilated area and away from incompatible materials (see Section 10.5). Do not store at temperatures above 95°F (35°C) or below 45°F (7.2°C). Do not expose the cylinders to open flame or temperatures above 122°F (50°C); storage at elevated temperatures can cause the container to rupture. Excessive heat can cause premature aging of components resulting in a shorter shelf life. Protect containers from physical abuse. Always store the containers in the upright position.

SECTION 8- EXPOSURE CONTROLS/ PERSONAL PROTECTION

8.1 Control Parameters

Ingredient	CAS Number	OSHA-PEL	ACGIH-TLV	Other
Diethylene Glycol	111-46-6			WEEL 10 mg/kg (50 ppm) AIHA TWA 10 mg/m ³
Nitrogen	7727-37-9			Limit value not established
1,1,1,2 Tetrafluoroethane	811-97-2			WEEL 1,000 ppm

8.2 Exposure controls:

Engineering Controls: Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

Eye/face Protection: Recommend full face shield and indirect vented goggles

Hand Protection: Use chemically resistant gloves (i.e. Nitrile gloves). Nitrile/butadiene rubber, butyl rubber, polyethylene, PVC (vinyl), or neoprene gloves are also effective. Glove selection should take into account potential body reactions to certain materials and manufacturer's instructions for use. Break through time of selected gloves must be greater than the intended use period.

Other Protective Equipment: Use clothing that protects against dermal exposure. Appropriate protective clothing varies depending on the potential for exposure. To ensure proper skin protection, wear PPE in such a manner that no skin is exposed.

Respiratory Protection: An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type (s) to reduce inhalation exposure: Half face piece or full face piece air-purifying respirator suitable for organic vapors and

particulates. Half face piece or full face piece supplied-air respirator. For questions about suitability for a specific application, consult with your respirator manufacturer.

Hygiene Measures: An eye wash station or portable eye wash station should be in the area. Wash hands thoroughly after use, before eating, drinking or using the lavatory. Employees/Users should be educated and trained in the safe use and handling of this product.

SECTION 9- PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties	
General Physical Form	Liquid. Forms an off-white to yellowish froth when released from the container
Odor	Slight fluorocarbon odor
Odor Threshold	No data available
pH	No data available
Melting Point/Freezing Point	No data available
Initial Boiling Point and Boiling Range	<66°F (<19°C) (propellant)
Flash Point	>199°F (>93°C)
Evaporation Rate	No data available
Flammability	No applicable
Lower Flammability/Explosive Limit	Not available
Upper Flammability/Explosive Limit	Not available
Vapor Pressure	85.7 psi @ 70°F
Vapor Density	No data available
Relative Density/Specific Gravity	~ 1.1 @ 25°C (Water = 1)
Solubility	Water: moderate
Partition coefficient: n-octanol/water	No data available
Auto-ignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	No data available
Oxidizing Properties	Not available
VOC Content (calculated minus exempt compounds)	Calculated at around 2 g/L, calculated SCAQMD rule 443.1 2 g/L when mixed as intended with Part A, calculated SCAQMD rule 443.1

SECTION 10- STABILITY AND REACTIVITY

10.1 Reactivity

This material may be reactive with certain agents under certain conditions- see remaining headings in this section.

10.2 Chemical stability

Stable under normal conditions of use and recommended storage conditions. See Section 7 for storage recommendations.

10.3 Possibility of hazardous reactions

Exposure to elevated temperatures can cause containers to rupture or explode. Chemicals are under pressure.

10.4 Conditions to avoid

Avoid heat and flames.

10.5 Incompatible materials

Strong acids and strong oxidizing agents

10.6 Hazardous decomposition products

None known.

Refer to section 5.2 for hazardous decomposition products during combustion

SECTION 11- TOXICOLOGICAL INFORMATION

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, , because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:

May cause additional health effects (see below)

Skin Contact:

May be harmful in contact with skin. Corrosive (Skin Burns): Signs/symptoms may include localized redness, swelling, itching, intense pain, blistering, ulceration, and tissue destruction.

Eye Contact:

Corrosive (Eye Burns): Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

Ingestion:

Harmful if swallowed. Gastrointestinal Corrosion: Signs/symptoms may include severe mouth, throat and abdominal pain; nausea; vomiting; and diarrhea; blood in the feces and/or vomitus may also be seen.

Additional Health Effects:

Single exposure may cause target organ effects:

Liver effects: Signs/symptoms may include loss of appetite, weight loss, fatigue, weakness, abdominal tenderness and jaundice.

Neurological Effects: Signs/symptoms may include personality changes, lack of coordination, sensory loss, tingling or numbness of the extremities, weakness, tremors, and/or changes in blood pressure and heart rate.

Kidney/Bladder Effects: Signs/symptoms may include changes in urine production, abdominal or lower back pain, increased protein in urine, increased blood urea nitrogen (BUN), blood in urine, and painful urination.

Single exposure, above recommended guidelines, may cause:

Cardiac Sensitization: Signs/symptoms may include irregular heartbeat (arrhythmia), faintness, chest pain, and may be fatal.

Prolonged or repeated exposure may cause target organ effects:

Liver Effects: Signs/symptoms may include loss of appetite, weight loss, fatigue, weakness, abdominal tenderness and jaundice.

Endocrine Effects: Signs/symptoms may include disruption of gonadal, thyroid, adrenal, or pancreatic function; changes in hormone production; alterations in circulating hormone levels; and/or changes in tissue response to hormones.

Acute toxicity:			
Primary irritant effect:			
On the skin: Caustic effect on skin and mucous membranes			
			On the eye: Strong caustic effect
Probable routes of exposure: Inhalation, eye contact and skin contact.			
			Acute effects (acute toxicity, irritation and
Specific organ toxicity- single exposure			
			No data available
Specific organ toxicity- repeated			
			May cause damage to organs though prolonged
Aspiration hazard			
No data available			

SECTION 12- ECOLOGICAL INFORMATION

12.1 Ecotoxicity

Toxic to aquatic life with long lasting effects.

12.2 Persistence and degradability

No relevant information available.

12.3 Bioaccumulation potential

No relevant information available.

12.4 Mobility

No relevant information available.

12.5 Results of PBT and vPvB assessment

No data available

12.6 Other adverse effects

Additional ecological information: Do not allow material to run into surface waters, wastewater, or soil. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

SECTION 13- DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods

Always wear proper protective equipment as you would while spraying the two-component foam in a well-ventilated area.

Procedure for handling empty or partially used disposable cylinders (not returnable):

1. DO NOT INCINERATE CYLINDERS
2. Dispense the foam into a waste container like a cardboard box or plastic bag. Depressurize the used cylinders using the dispensing unit with a new nozzle attached. Spray the foam until one of the components/cylinders no longer sprays chemical.
3. Remove the nozzle and then continue to depressurize by dispensing the chemicals into a waste container (a box lined with a plastic bag) that has adequate industrial liquid absorbing medium in the bottom. Dispense the residual chemicals until the pressure is down to a minimum or there are just large bubbles in the hose.
4. Close the cylinder valves completely, and then operate the dispensing unit again to empty and depressurize the hoses. Use a 9/16" wrench and remove the hoses from the cylinders. Use caution in case there is some residual chemical and/or pressure in the hoses.
5. Invert the cylinder and point away from face. Slowly open the cylinder over the waste container to catch any residual spray.
6. Return the cylinder to an upright position. Shake the container; there should not be any sloshing of liquid. Make sure to leave valves OPEN-do not close.
7. The user of this material has the responsibility to DISPOSE OF EMPTY CYLINDERS, UNUSED MATERIAL AND RESIDUES IN COMPLIANCE TO ALL APPLICABLE FEDERAL, STATE, INTERNATIONAL AND LOCAL REGULATIONS REGARDING TREATMENT, STORAGE AND DISPOSAL FOR HAZARDOUS AND NONHAZARDOUS WASTES. Check with your local waste disposal service for guidance.

NOTE: After dispensing if one cylinder has chemical left in it; treat as hazardous material.

SECTION 14- TRANSPORTATION

Note: Transportation information is for reference only. Customer is urged to consult 49 CFR 100-177, IMDG, IATA, EC, United Nations TDG and WHMIS (Canada) TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods of shipping.

	Containers Greater Than 1000 cu. cm. (1 liter)
U.S. DOT	UN3500 Chemicals Under Pressure n.o.s. (1,1,1,2-Tetrafluoroethane, Nitrogen) 2.2 (Non-Flammable Gas Label) Hazard Class 2.2 Packaging Group N/A
AITA	UN3500 Chemicals Under Pressure n.o.s. (1,1,1,2-Tetrafluoroethane, Nitrogen) 2.2 (Non-Flammable Gas Label) Packing Instruction (Cargo & Passenger) 218 Hazard Class 2.2 Packaging Group N/A
IMDG	UN3500 Chemicals Under Pressure n.o.s. (1,1,1,2-Tetrafluoroethane, Nitrogen) 2.2 (Non-Flammable Gas Label) Hazard Class 2.2 Packaging Group N/A

SECTION 15- REGULATORY

15.1 Safety, health, and environmental regulations/legislations specific for the substance or mixture

U.S. Federal Regulations:

OSHA Hazard Communication Standard: This material is classified as hazardous in accordance with OSHA 29 CFR 1910-1200

TSCA Status: All components of this product are listed on the Toxic Substance Control Act (TSCA) Inventory.

This material contains a chemical which requires export notification under TSCA Section 12(b): Diethyltoluenediamine (CAS #68479-98-1) Regulation: TSCA 4 Test Rule Chemicals. Status: Applicable

Superfund Amendments and Reauthorization Act (SARA)

SARA Section 311/312 Hazard Categories:

Fire Hazard- No Pressure Hazard-Yes Reactivity Hazard- Yes Immediate Hazard- Yes Delayed Hazard- Yes

SARA 313 Information: No components of the product are subject to reporting levels established by Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986.

SARA 302/304 Extremely Hazardous Substance: No components of the product exceed the threshold (de minimis) reporting levels established by these sections of the Title III of SARA.

SARA 302/304 Emergency Planning & Notification: No components of the product exceed the threshold (de minimis) report levels established by these sections of the Title III of SARA.

Comprehensive Response Compensation and Liability Act (CERCLA): None of the substances in this product are contained in levels that exceed the threshold (de minimis) reporting levels established by CERCLA

Clean Air Act (CAA) – This product does not have any components listed as a Hazardous Air Pollutant (HAP) designated in CAA Section 112 (b). This product does not contain any Class 1 or Class 2 Ozone depletors.

Clean Water Act (CWA) – This products does not have any components listed as a Hazardous Substance under the CWA. None of the chemicals in these products are listed as Priority Pollutants under the CWA. None of the chemicals listed in these products are listed as Toxic Pollutants under the CWA.

U.S. State Regulations:

California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986: None of the chemicals are listed.

Other U.S. State Inventories:

Diethylene glycol (CAS#111-46-6) is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/air Pollutants lists: MN, PA

1,1,1,2- Tetrafluoroethane (CAS #811-97-2) is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/Air Pollutants lists: ME, WI

Global Chemical Inventory Lists:

United States: Toxic Substance Control Act (TSCA)- Yes

Canada: Domestic Substances List (DSL)- Yes

Canada: Non-Domestic Substances List (NDSL)- No

SECTION 16- OTHER

Issue date	05-15-2016
Revision date	12-15-2016
Version #	2
NFPA ratings	Health: 3 Flammability: 1 Physical hazard: 1

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Revision Information	NA
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