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**SECTION 1: PRODUCT AND COMPANY INFORMATION**

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**PRODUCT NAME:** LRF Adhesive M Part A

**TRADE NAME:** N/A

**CHEMICAL NAME /  
SYNONYM:** N/A

**CHEMICAL FAMILY:** N/A

**MANUFACTURER:** GAF

**ADDRESS:** 1 Campus Drive, Parsippany, NJ 07054

**24 HOUR EMERGENCY  
PHONE: (CHEMTREC)** 800-424-9300

**INFORMATION ONLY:** 800-766-3411

**PREPARED BY:** Corporate EHS

**APPROVED BY:** Corporate EHS

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**SECTION 2: HAZARDS IDENTIFICATION**

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**NFPA and HMIS RATINGS:**

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

**GHS LABEL ELEMENTS:**

**GHS CLASSIFICATION:** Target Organ (SE) - Category 3  
Target Organ (RE) - Category 2  
Acute Toxicity - Category 4  
Skin Irritant - Category 2  
Skin Sensitizer - Category 1  
Respiratory Irritant  
Eye Irritant - Category 2A

**GHS PICTOGRAMS:****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.

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**ADDITIONAL HAZARD IDENTIFICATION INFORMATION:****PRIMARY ROUTE OF EXPOSURE:** Inhalation, Skin Contact, Eye Contact**SIGNS & SYMPTOMS OF EXPOSURE****EYES:** This product is irritating to the eyes.**SKIN:** This product is irritating to the skin. This product may cause an allergic skin reaction.**INGESTION:** This product is not expected to be ingested. However, ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.**INHALATION:** Allergic lung reaction such as asthma, which includes coughing, wheezing, chest pain and tightness, difficulty breathing and shortness of breath.**ACUTE HEALTH HAZARDS:** See above.**CHRONIC HEALTH HAZARDS:** Repeated inhalation and skin contact exposures may cause sensitization.**CARCINOGENICITY:** None known.

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**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

CHEMICAL NAME	CAS #	% (BY WT)	OCCUPATIONAL EXPOSURE LIMITS		
			OSHA	ACGIH	OTHER
diphenylmethanediisocyanate, isomers and homologues	9016-87-9	50 – 100	NE	NE	NE
4,4'-Methylene Bisphenol Isocyanate (MDI)	101-68-8	25 – 50	0.02 ppm – ceiling	0.005 ppm	0.005 ppm; 0.02 ppm – ceiling (10 min.)
Methylene Bisphenol Isocyanate (MDI)	26447-40-5	2.5 – 10	NE	NE	NE

NE = Not Established

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

- EYES:** Immediately flush eyes with water for at least 15 minutes while holding eyelids open. Seek medical attention.
- SKIN:** Wash exposed skin with soap and water. If irritation develops or persists, seek medical attention. Discard contaminated clothing.
- INHALATION:** Move affected individual to an area free of risk from further exposure. Administer oxygen or artificial respiration as needed. Immediate or delayed asthma-like symptoms may develop. Seek medical attention.
- INGESTION:** If the material is swallowed, seek immediate medical attention. Rinse out mouth with water. Drink 1 - 2 glasses of water but DO NOT induce vomiting. Never give anything by mouth to a victim who is unconscious or is having convulsions.

**NOTES TO PHYSICIANS OR FIRST AID PROVIDERS:** None known.

**SECTION 5: FIRE FIGHTING PROCEDURES**

- SUITABLE EXTINGUISHING MEDIA:** Water spray, carbon dioxide, or dry chemical. Fight larger fires with water spray. Use fire fighting measures that suit the environment.
- HAZARDOUS COMBUSTION PRODUCTS:** Carbon dioxide, carbon monoxide, oxides of nitrogen, dense black smoke, hydrogen cyanide, isocyanic acid, other undetermined compounds.

**RECOMMENDED FIRE FIGHTING PROCEDURES:**

Firefighters should wear full protective clothing including self contained breathing apparatus.

**UNUSUAL FIRE & EXPLOSION HAZARDS:**

Containers may burst if overheated. This product reacts with water producing carbon dioxide gas. Do not reseal contaminated containers as a hazardous pressure build up could result in container rupture.

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**SECTION 6: ACCIDENTAL RELEASE MEASURES**

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**ACCIDENTAL RELEASE MEASURES:**

Absorb spill with inert material. Ventilate the contaminated area. Shovel material into appropriate container for further neutralization and disposal. Evacuate the area promptly. Keep upwind of the spilled material and isolate exposure. Avoid inhalation of vapors and mists. Surfaces may become slippery after a spill. Wear PPE for spill clean up. Stop the flow of material, if possible. Do not allow to drain to sewers.

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**SECTION 7: HANDLING AND STORAGE**

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**HANDLING AND STORAGE:**

Keep containers properly sealed in a cool, dry, well ventilated area between 32 – 90 °F. Do not store in open, unlabeled or mislabeled containers. Keep away from open flames and high temperatures.

**OTHER PRECAUTIONS:**

Product reacts with water and may produce heat and/or gases. Do not reuse empty containers without proper cleaning and reconditioning.

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**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

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**ENGINEERING CONTROLS / VENTILATION:**

Provide adequate local ventilation to maintain worker exposure below exposure limits.

**RESPIRATORY PROTECTION:**

Use a NIOSH-approved respirator to protect against inhalation of vapors. A respirator should be used if ventilation is unavailable, or is inadequate for keeping vapor levels below the applicable exposure limits. Consult the respirator manufacturer to determine the appropriate type of equipment for a given application.

**EYE PROTECTION:**

Wear safety glasses and a face shield or chemical goggles.

**SKIN PROTECTION:**

The use of neoprene, nitrile or butyl rubber gloves is recommended.

**OTHER PROTECTIVE EQUIPMENT:**

Eye wash stations and safety showers are recommended.

**WORK HYGIENIC PRACTICES:**

Wash exposed skin prior to eating, drinking or smoking and at the end of each shift.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

<b>APPEARANCE &amp; ODOR:</b>	Dark brown liquid with faint aromatic odor.		
<b>FLASH POINT:</b>	220 °F	<b>LOWER EXPLOSIVE LIMIT:</b>	No Data
<b>METHOD USED:</b>	Pensky-Martin CC	<b>UPPER EXPLOSIVE LIMIT:</b>	No Data
<b>EVAPORATION RATE:</b>	No Data	<b>BOILING POINT:</b>	392 °F
<b>pH (undiluted product):</b>	No Data	<b>MELTING POINT:</b>	No Data
<b>SOLUBILITY IN WATER:</b>	Not Miscible	<b>SPECIFIC GRAVITY:</b>	1.22
<b>VAPOR DENSITY:</b>	No Data	<b>PERCENT VOLATILE:</b>	< 0.15
<b>VAPOR PRESSURE:</b>	0 mm Hg	<b>MOLECULAR WEIGHT:</b>	No Data
<b>VOC WITH WATER (LBS/GAL):</b>	No Data	<b>SPECIFIC GRAVITY (LBS/GAL):</b>	10.2

**SECTION 10: STABILITY AND REACTIVITY****THERMAL STABILITY:****STABLE** X**UNSTABLE** **CONDITIONS TO AVOID (STABILITY):**

Avoid high temperatures. Avoid contact with water. Reacts with amines, caustic alkali solutions, alcohols, ammonia, oxidizers, acids, polyols.  
 Reacts with water forming carbon dioxide-may rupture sealed containers if contaminated with water.  
 May produce violent reactions with bases and numerous organic substances including alcohols and amines.

**INCOMPATIBILITY (MATERIAL TO AVOID):**

Water, alcohols, amines, bases and acids.

**HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:**

Carbon dioxide, carbon monoxide, oxides of nitrogen, dense black smoke, hydrogen cyanide, isocyanic acid, other undetermined compounds.

**HAZARDOUS POLYMERIZATION:**

Contact with moisture, other materials that react with isocyanates, or temperatures above 350F, may cause polymerization.

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**SECTION 11: TOXICOLOGICAL INFORMATION**

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**TOXICOLOGICAL INFORMATION:** 4,4' Methylene Bisphenol Isocyanate (MDI)

Oral LD50 Mouse: 2200 mg/kg

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**SECTION 12: ECOLOGICAL INFORMATION**

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**ECOLOGICAL INFORMATION:** No information available.

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**SECTION 13: DISPOSAL CONSIDERATIONS**

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**WASTE DISPOSAL METHOD:** Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Must be specially treated adhering to official regulations.  
Disposal must be made according to official regulations.

**RCRA HAZARD CLASS:** N/A

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**SECTION 14: TRANSPORTATION INFORMATION**

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**DOT**

Not regulated as dangerous goods.

**IATA**

Not regulated as dangerous goods.

**IMDG**

Not regulated as dangerous goods.

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**SECTION 15: REGULATORY INFORMATION**

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**U.S. FEDERAL REGULATIONS**

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

**CERCLA:** CERCLA Hazardous Substances (40 CFR 302)

Reportable Quantity – Components

4,4'-Methylene Bisphenol Isocyanate (MDI): 101-68-8, 5000 lbs.

**SARA**

**311/312 HAZARD CATEGORIES:** Fire Hazard, Acute Health Hazard, Chronic Health Hazard

**313 REPORTABLE INGREDIENTS:** 4,4'-Methylene Bisphenol Isocyanate (MDI), 101-68-8, 30 – 60%  
diphenylmethanediisocyanate, isomers and homologues, 9016-87-9, 30 – 60%

**CALIFORNIA PROPOSITION 65:** None.

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'-Methylene Bisphenol Isocyanate (MDI)	101-68-8	Yes	Yes	Yes	Yes	Yes	Yes
diphenylmethanediisocyanate, isomers and homologues	9016-87-9	Yes	Yes	Yes	Yes	Yes	Yes

**SECTION 16: OTHER INFORMATION**

**ADDITIONAL COMMENTS:** None

**DATE OF PREVIOUS SDS:** September 2016

**CHANGES SINCE PREVIOUS SDS:** Ingredient Change

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.