



SECTION 1: PRODUCT AND COMPANY INFORMATION

PRODUCT NAME: Matrix 220 Part B

TRADE NAME: NA

**CHEMICAL NAME /
SYNONYM:** NA

CHEMICAL FAMILY: Aromatic Isocyanate

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

GHS LABEL ELEMENTS:

SECTION 2: HAZARD IDENTIFICATION

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

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
 Suspected of causing cancer
 Harmful if inhaled
 Toxic to aquatic life with long lasting effects

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS #	% (BY WT)	OCCUPATIONAL EXPOSURE LIMITS		
			OSHA	ACGIH	OTHER
4,4'-Diphenylmethane Diisocyanate	101-68-8	<45	NE	NE	NE
Higher Oligomers of MDI	9016-87-9	45-55	NE	NE	NE
Diphenylemethane Diisocyanate (MDI)	5873-54-1	1-10	0.02 ppm	0.005 ppm	0.005 ppm – 0.02 10 min. ceiling

NE = Not Established

SECTION 4: HAZARDS IDENTIFICATION

PRIMARY ROUTE OF EXPOSURE: Inhalation and absorption.

SIGNS & SYMPTOMS OF EXPOSURE

ACUTE HEALTH HAZARDS:

EYES: Liquid, aerosols or vapors are irritating and can cause tearing, reddening and swelling. If left untreated, corneal damage can occur and injury is slow to heal. However, damage is usually reversible.

SKIN: Isocyanates react with skin protein and moisture and can cause irritation, which may include the following symptoms: reddening, swelling, rash, scaling or blistering. Cured material is difficult to remove.

INGESTION: Can result in irritation and corrosive action in the mouth, stomach

tissue and digestive tract. Symptoms can include sore throat, abdominal pain, nausea, vomiting and diarrhea.

INHALATION:

MDI vapors or mist at concentrations above the TLV can irritate the mucous membranes in the respiratory tract causing runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function. Persons with preexisting, nonspecific bronchial hyper reactivity can respond to concentrations below the TLV with similar symptoms as well as asthma attack. Exposure well above the TLV may lead to bronchitis, bronchial spasm and pulmonary edema. These effects are usually reversible. Chemical or hypersensitive pneumonitis, with flu-like symptoms has also been reported. These symptoms can be delayed up to several hours after exposure.

ACUTE HEALTH HAZARDS:**CHRONIC HEALTH HAZARDS:**

Asthma, other respiratory disorders, skin allergies, eczema

CARCINOGENICITY:

Product components listed as a IARC, NTP, ACGIH, or OSHA carcinogen: none

SECTION 5: FIRST AID MEASURES

FIRST AID PROCEDURES**EYES:**

Flush with water for at least 15 minutes while holding eye lids apart. Get medical attention immediately.

SKIN:

Clean area of contact thoroughly using soap and water. If irritation, rash or other disorders develop, get medical attention immediately.

INHALATION:

Leave area to breathe fresh air. Avoid further overexposure. If symptoms persist, get medical attention.

INGESTION:

Do not induce vomiting unless advised by a physician. Call nearest Poison Control Center or Physician immediately.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS:

The petroleum hydrocarbons in this product are a complex mixture of paraffinic, naphthenic, and aromatic hydrocarbons. As with other petroleum products, the aromatic compounds are present in varying concentrations and structures. Some of these compounds may be those which have been shown to result in tumor formation in animals under laboratory conditions. The concentrations of aromatic compounds in this product require that the precautions outlined in this MSDS be followed to minimize personnel exposure. Provide adequate ventilation to keep vapors below allowable exposure levels. Use PPE appropriate for the task.

SECTION 6: FIRE FIGHTING PROCEDURES

SUITABLE EXTINGUISHING MEDIA:

Dry chemical, foam, and carbon dioxide. Water spray for large fires.

HAZARDOUS COMBUSTION PRODUCTS:	Carbon monoxide, oxides of nitrogen, traces of HCN, MDI vapors.
RECOMMENDED FIRE FIGHTING PROCEDURES:	During a fire, MDI vapors and other irritating, highly toxic gases may be generated by thermal decomposition or combustion. At temperatures greater than 400°F, polymeric MDI can polymerize and decompose which can cause pressure build-up in closed containers. Explosive rupture is possible. Therefore, use cold water to cool fire-exposed containers.
UNUSUAL FIRE & EXPLOSION HAZARDS:	If container is exposed to high heat, 400°F it can be pressurized and possible rupture. MDI reacts slowly with water to form carbon dioxide gas. This gas can cause sealed containers to expand and possibly rupture.

SECTION 7: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES:

Spill/Leak Procedures:	Evacuate and ventilate spill area; dike spill to prevent entry into water system; wear full protective equipment, including respiratory equipment during clean up. If a transportation spill, call CHEMTREC 800-424-9300. If temporary control of isocyanate vapor is required, blanket with protein foam.
Small Spills:	Stop spill at source if possible. Isolate and confine by diking, or similar method. Remove discharged material. In a container, use neutralizing solution; 80% water, 20% Tergitol TMN-10, or; 90% water, 3-8 % concentrated ammonia, and 2% detergent. Let stand uncovered for 48 hours to allow carbon dioxide to escape.
Large Spills Containment:	For large spills, dike far ahead of liquid spill for later disposal. Do not release into sewers or waterways.
Cleanup	Mix with inert absorbent material such as soil, sand, or oil dry, to stabilize.
Regulatory Requirements:	Notify local health and pollution control agencies as appropriate. Follow applicable OSHA regulations (29 CFR 1900.120). Subject to hazardous waste treatment, storage, and disposal requirements under RCRA for characteristic of ignitability (D001). For disposal follow all federal, state, and local regulations regarding solid waste.

SECTION 7: HANDLING AND STORAGE

HANDLING PRECAUTIONS:	Avoid contact with skin and eyes. Do not breathe aerosols or vapors. Warning properties (eye, nose and throat irritations) are not adequate to prevent chronic overexposure from inhalation.
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STORAGE REQUIREMENTS: Store in tightly closed containers to prevent moisture contamination. Do not reseal if contamination is suspected.

REGULATORY REQUIREMENTS: None known.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Use only in well ventilated areas. Provide maximum ventilation in enclosed areas.

VENTILATION: Local exhaust should be used to maintain levels below the TLV whenever MDI is processed, heated, or spray applied. Standard reference sources regarding industrial ventilation (i.e., ACGIH Industrial Ventilation) should be consulted for guidance about adequate ventilation.

RESPIRATORY PROTECTION: Concentrations greater than the TLV can occur when MDI is sprayed, heated or used in a poorly ventilated area. In such cases, or whenever concentrations of MDI exceed the TLV or are not known, respiratory protection must be worn. A supplied air respirator (either positive pressure or continuous flow type) is required. In an emergency situation, a self-contained breathing apparatus may be used. MDI has poor warning properties, since the concentration at which MDI can be smelled is substantially higher than the maximum exposure limit. Observe OSHA regulations for respirator use (29 CFR 1910.134)

PROTECTIVE CLOTHING/EQUIPMENT: Use suitable impervious nitrile or butyl rubber gloves and protective apparel to reduce exposure. Wear appropriate eye protection (chemical safety goggles and/or face shield) to prevent eye contact per OSHA eye- and face-protection regulations (29 CFR 1910.133). Do not wear contact lenses. Do not touch eyes with contaminated body parts or materials. Prevent contact with shoes and clothing.

SAFETY STATIONS: Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

CONTAMINATED EQUIPMENT Separate contaminated work clothes from street clothes. Launder before reuse. Remove this material from your shoes and clean personal protective equipment.

COMMENTS: Isocyanate exposure levels must be monitored.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE & ODOR:	Brown-black liquid with. mild musty odor.		
FLASH POINT:	N/A	LOWER EXPLOSIVE LIMIT:	N/A
METHOD USED:	N/A	UPPER EXPLOSIVE LIMIT:	N/A
EVAPORATION RATE:	N/A	BOILING POINT:	406°F
pH (undiluted product):	N/A	MELTING POINT:	<32°F
SOLUBILITY IN WATER:	Negligible	SPECIFIC GRAVITY:	<=1.11
VAPOR DENSITY:	8.5 (MDI)	PERCENT VOLATILE:	N/A
VAPOR PRESSURE:	5 mmHg@ 77°F (MDI)	MOLECULAR WEIGHT:	Est. 350 lb/lb-mole
VOC WITH WATER (LBS/GAL):	Negligible	WITHOUT WATER (LBS/GAL):	Negligible

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

Contamination with water and high temperatures.

INCOMPATIBILITY (MATERIAL TO AVOID):

Water, amines, strong bases, alcohols. Will cause some corrosion to copper alloys and aluminum.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:

Primary decomposition products are carbon monoxide, oxides of nitrogen, traces of HCN, MDI vapors and aerosols.

HAZARDOUS POLYMERIZATION:

Hazardous polymerization may occur when exposed to moisture, other material which react with isocyanates, or temperature above 400°F

SECTION 11: TOXICOLOGICAL INFORMATION**EYE EFFECTS:**

Vapors may cause a slight smarting of the eyes or respiratory system if present in high concentrations. The effect is temporary.

ACUTE INHALATION EFFECTS:4 hour LC50 for MDI in rats ranges from 370-490 mg/m³**CARINOGENCIITY:**In the study of chronic effects (see below) pulmonary adenocarcinoma was considered to be related to MDI. This was observed in rats exposed to 6.0 mg/m³.

SKIN EFFECTS: May result in skin sensitivity, such as irritation, rashes, and dermatitis.

ACUTE ORAL EFFECTS (rat) Greater than 10,000 mg/kg

MUTAGENICITY/TERATOGENICITY No data.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY: Effect of low concentrations on aquatic life is unknown. May be dangerous if it enters water intakes.

ENVIRONMENTAL FATE:

ENVIRONMENTAL TRANSPORT: No data.
ENVIRONMENTAL DEGRADATION: No data.
SOIL ABSORPTION/MOBILITY: No data.

SECTION 13: DISPOSAL CONSIDERATIONS

DISPOSAL: Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable Federal, state, and local regulations.

DISPOSAL REGULATORY REQUIREMENTS: Subject to hazardous waste treatment, storage, and disposal requirements under RCRA. Follow Federal, state, and local regulations for disposal of solid waste.

CONTAINER CLEANING AND DISPOSAL: Recommend using a non-hazardous solvent to remove the product. Follow Federal, state, and local regulations for disposal of the waste material, regardless of its waste classification.

SECTION 14: TRANSPORTATION INFORMATION

U.S. DOT TRANSPORTATION

PROPER SHIPPING NAME: Environmentally Hazardous Substances, liquid, n.o.s. (contains 4, 4' – Diphenylmethane Diisocyanate (MDI))

HAZARD CLASS: 9

ID NUMBER: UN3082

PACKING GROUP: III

LABEL STATEMENT: Class 9

OTHER: Packaging Authorizations:
 a) Exceptions: 173.155
 b) Non-bulk Packaging: 173.203
 c) Bulk Packaging: 173.241

Quantity Limitations:
 a) Passenger Aircraft, or Railcar: NA
 b) Cargo Aircraft Only: NA

Vessel Stowage Requirements:
 a) Vessel Stowage: A
 b) Other:

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

RCRA: RCRA Hazardous Waste Number: Not listed. RCRA Hazardous Waste Classification (40 CFR 261): Not currently a characteristic waste. Up to user at time of disposal to make waste determination.

TSCA:

CERCLA: CERCLA Reportable Quantity (RQ): 11,111 lbs

SARA:

311/312 HAZARD CATEGORIES: Immediate Health Hazard; Delayed Health Hazard

SARA TOXIC CHEMICAL: Polymeric Diphenylmethane Diisocyanate

Not listed.

SARA EHS (EXTREMELY HAZARDOUS SUBSTANCE) (40 CFR 355):

STATE REGULATIONS: Listed in state hazardous substance list for PA, FL, IL, MA, NJ, CN

OSHA REGULATIONS: This product is hazardous under the criteria of Federal OSHA Hazard Communication Standard 29 CFR 1910.1200

SECTION 16: OTHER INFORMATION

ADDITIONAL COMMENTS: None.

DATE OF PREVIOUS SDS: November 2014

CHANGES SINCE PREVIOUS SDS: Headquarters Address Change

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