



MATERIAL SAFETY DATA SHEET

PRODUCT ISOFOAM® A FIBERFOAM
A SIDE

HAZARD CLASSIFICATION
 1. EXTREME
 2. MODERATE
 3. SLIGHT
 4. INSIGNIFICANT

1084

SECTION I

1 MANUFACTURING DIVISION OR SUBSIDIARY
 IPI, A Division of PMC, Inc.

2 ADDRESS NUMBER, STREET, CITY, STATE, ZIP CODE
 505 Blue Ball Road, Elkton, Maryland 21921

3 CHEMICAL NAME OR FAMILY
 Polymeric Methylene Diphenyl Isocyanate (MDI)

4 FORMULA
 $CH_2(C_6H_4NCO)_2$ + Higher Molecular weight oligomers

EMERGENCY TELEPHONE
 MANUFACTURER 301-392-4800
 CHEM TREC 1-800-424-9300

SECTION II - CHEMICAL AND PHYSICAL PROPERTIES

HAZARDOUS DECOMPOSITION PRODUCTS
 Oxides of Carbon and Nitrogen

INCOMPATIBILITY (KEEP AWAY FROM)
 Water (Moisture), Alcohols, Amines, Strong Acids and Bases

LIST ALL TOXIC AND HAZARDOUS INGREDIENTS
 Methylene Diphenyl Diisocyanate CR 50% 101-68-8
 Polymeric Methylene Diphenyl Diisocyanate CR 50% 9016-87-9

FORM
 Liquid

ODOR
 Aromatic Odor

APPEARANCE
 Viscous Liquid

COLOR
 Dark Brown

SPECIFIC GRAVITY
 WATER = 11 1.23 @ 25°C

BOILING PT.
 > 207 °C
 > 406 °C

MELTING PT.
 NDA °C
 NDA °F

SOLUBILITY IN WATER
 AT NA °C Reacts

% VOLATILE (BY WT %)
 NIL

EVAP. RATE
 Water = 11 NIL

VAPOR PRESSURE
 (mm Hg at 20 °C) < 0.00005

VAPOR DENSITY
 (AIR = 11) > 1

pH AS IS
 NDA
 pH 1

STRONG ACID _____
 STRONG BASE _____
 STABLE _____
 UNSTABLE _____

VISCOSITY
 SUS AT 100 °F < 100 =
 100 OR > =
 NDA

Viscosity @ 25°C
 250 cps (MAX)

SECTION III - FIRE AND EXPLOSION DATA

SPECIAL FIRE FIGHTING PROCEDURES
 Firefighters must be equipped to prevent breathing of vapors or products of combustion. Must wear self-contained breathing apparatus

FLASH POINT (METHOD USED)
 C.O.C.
 218 °C 425 °F

FLAMMABLE LIMITS %
 LOWER 450°C NDA
 UPPER _____

EXTINGUISHING AGENTS
 X DRYCHEMICAL X CO₂
 X WATERSPRAY X FOAM
 WATERFOG = SAND/EARTH
 OTHER _____

UNUSUAL FIRE AND EXPLOSION HAZARDS
 Avoid moisture contamination in closed containers. Reaction with moisture will generate CO₂ which may rupture the container.

SECTION IV - HEALTH HAZARD DATA

PERMISSIBLE CONCENTRATIONS (AIR)
 Methylene Diphenyl Isocyanate
 OSHA PEL 0.02 (C) PPM
 ACGIH TWA 0.005 PPM

EFFECTS OF OVEREXPOSURE
 Irritant to eyes and respiratory tract. May cause headaches, nausea, coughing, shortness of breath, chest pains. May result in respiratory distress.

TOXICOLOGICAL PROPERTIES
 May cause allergic skin or respiratory reaction. Persons with known respiratory allergies should avoid exposure to this products.

EMERGENCY FIRST AID PROCEDURES
 EYES Flush with plenty of water for at least 15 minutes. Call a physician.
 SKIN CONTACT Wash thoroughly with soap & water. Remove contaminated clothing and discard contaminated shoes. Wash clothing before reuse.
 INHALATION Remove from contaminated area to a fresh air environment. Call a physician. If victim is not breathing, give artificial respiration-perferably mouth to mouth.
 SWALLOWED Call a physician immediately.

NA = NOT APPLICABLE

NDA = NO DATA AVAILABLE

< = LESS THAN

> = MORE THAN

88033

SECTION V - SPECIAL PROTECTION INFORMATION

VENTILATION TYPE REQUIRED (LOCAL, MECHANICAL, SPECIAL)
 Mechanical general/local exhaust ventilation to control vapors or mists below maximum exposure limits.

38

RESPIRATORY PROTECTION (SPECIFY TYPE)
 Use only NIOSH approved apparatus

37

PROTECTIVE GLOVES
 38 Impervious rubber or plastic

EYE PROTECTION
 39 Safety Goggles and face shield to avoid splashing on face.

OTHER PROTECTIVE EQUIPMENT
 40 NONE

SECTION VI - HANDLING OF SPILLS OR LEAKS

PROCEDURES FOR CLEAN-UP
 With adequate ventilation, cover with an inert absorbent material such as clay, or vermiculite, transfer to metal container. Saturate with water but DO NOT SEAL THE CONTAINER (CO₂ will be generated). Wash the area with water containing 5% ammonia & detergent. Wear respirator and other protective equipment for protection of eyes and skin during cleanup.

41

WASTE DISPOSAL
 Dispose of consistent with Federal, State, and local regulations.

42

SECTION VII - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE
 Avoid contact with moisture. Isocyanates react with water and generate CO₂ which may rupture sealed containers. Store between 60 and 85°F (16-30°C)

43

SECTION VIII - TRANSPORTATION DATA

44	UNREGULATED BY D.O.T. <input checked="" type="checkbox"/>	U.S. D.O.T. PROPER SHIPPING NAME 47 NA	
	REGULATED BY D.O.T. <input type="checkbox"/>	U.S. D.O.T. HAZARD CLASS 48 None	I.D. NUMBER 49 None
46	TRANSPORTATION EMERGENCY INFORMATION CHEM TREC 1-800-424-9300	49	LABEL(S) REQUIRED 51 None for domestic transportation
		52	FREIGHT CLASSIFICATION Liquid plastic Material/NOIBN Domestic - Drums Domestic Tank Wagon - Methylene Diphenyl Diisocyanate or Isocyanate Chemicals - NOI
48		53	SPECIAL TRANSPORTATION NOTES None

SECTION IX - COMMENTS

Note: THE FOAM PRODUCED IS AN ORGANIC MATERIAL AND MUST BE CONSIDERED AS COMBUSTIBLE THE FOAM MUST NOT BE LEFT EXPOSED OR UNPROTECTED. SHIELD THE FOAM FROM HEAT OR SPARKS WITH A THERMAL BARRIER.

54

SIGNATURE *[Signature]* TITLE Sales Service Manager

REVISION DATE 9/18/89 SENT TO ATTN: _____ DATE _____

SUPERSEDES _____

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind, express or implied, and we assume no responsibility for any loss, damage, or expense, direct or consequential, arising out of their use.



MATERIAL SAFETY DATA SHEET

PRODUCT ISOFOAM^R R-1322B
88035 FIREFOAM
B SIDE

HAZARD	4	EXTREME
	3	HIGH
	2	MODERATE
	1	SLIGHT
	0	INSIGNIFICANT

SECTION I

MANUFACTURING DIVISION OR SUBSIDIARY
1 IPI, A Division of PMC, Inc.

ADDRESS NUMBER, STREET, CITY, STATE, ZIP CODE
2 505 Blue Ball Road, Elkton, Maryland 21921

CHEMICAL NAME OR FAMILY
3 Not Applicable

FORMULA Blends of polyols, surfactants, catalysts and HCFC 141b.

EMERGENCY TELEPHONE MANUFACTURER
 1410 392-4800
 CHEM TREC 1-800-424-9300

SECTION II - CHEMICAL AND PHYSICAL PROPERTIES

CHEMICAL	PHYSICAL
HAZARDOUS DECOMPOSITION PRODUCTS 1 Oxides of Carbon and Nitrogen	FORM 8 Liquid
INCOMPATIBILITY (KEEP AWAY FROM) 5 Reacts with Isocyanates	ODOR 9 Slight Amine
LIST ALL TOXIC AND HAZARDOUS INGREDIENTS 7 Amine Catalyst <1%	APPEARANCE 10 Viscous Liquid
	COLOR 11 Brown
	SPECIFIC GRAVITY (WATER = 1) 12 NDA
	BOILING PT. 13 32 °C 90 °F
	MELTING PT. 14 NA °C NA °F
	SOLUBILITY IN WATER AT 25 °C 15 Slight Nil
	% VOLATILE (BY WT %) 16 Nil
	EVAP. RATE 17 (WATER = 1) Nil
	VAPOR PRESSURE (mm Hg at 20°C) 18 N/A
	VAPOR DENSITY (AIR = 1) 19 >1
	pH AS IS 20 NDA

SECTION III - FIRE AND EXPLOSION DATA

SPECIAL FIRE FIGHTING PROCEDURES 24 Firefighters must be equipped to prevent breathing of vapors or products of combustion. Wear self-contained breathing apparatus.	FLASH POINT (METHOD USED) WITHOUT HCFC/H ₂ O 26 NDA °C NDA °F
UNUSUAL FIRE AND EXPLOSION HAZARDS 28 NDA	FLAMMABLE LIMITS % 27 LOWER NDA UPPER NDA
	EXTINGUISHING AGENTS X DRYCHEMICAL X CO ₂ X WATERSPRAY X FOAM X WATERFOG X SAND/EARTH 29 OTHER

SECTION IV - HEALTH HAZARDS

PERMISSIBLE CONCENTRATIONS (AIR) 25 NDA
EFFECTS OF OVEREXPOSURE 30 Irritant to eyes and respiratory tract.
TOXICOLOGICAL PROPERTIES 31 NDA
EMERGENCY FIRST AID PROCEDURES 32 EYES Wash with large amounts of water for 15 minutes and see a physician. 33 SKIN CONTACT Wipe off excess and wash area with soap and water. Remove contaminated clothing and discard contaminated shoes. Wash clothes before reuse. 34 INHALATION Provide uncontaminated air supply and see a physician. 35 IF SWALLOWED See a physician immediately.

STRONG ACID _____ =
STRONG BASE _____ =
STABLE _____ X
UNSTABLE _____ =
21
VISCOSITY (SUB AT 100°F) <100 = 1000 > =
22 NDA
23 Viscosity @ 20°C
NDA

NA = NOT APPLICABLE

NDA = NO DATA AVAILABLE

< = LESS THAN

> = MORE THAN

MATERIAL SAFETY DATA SHEET

PRODUCT ANSOL

4034

SECTION V - SPECIAL PROTECTION INFORMATION

VENTILATION TYPE REQUIRED (LOCAL, MECHANICAL, SPECIAL) <p style="text-align: center; font-size: 1.2em;">Mechanical <i>88033</i></p>	PROTECTIVE GLOVES Impervious Rubber or Plastic 38 Plastic
RESPIRATORY PROTECTION (SPECIFY TYPE) Use only NIOSH approved apparatus	EYE PROTECTION 39 Safety Goggles
37	OTHER PROTECTIVE EQUIPMENT 40 None

SECTION VI - HANDLING OF SPILLS OR LEAKS

PROCEDURES FOR CLEAN-UP

With adequate ventilation, cover with an inert absorbent such as clay or vermiculite and transfer to a waste container. Wash area with detergent and water.

41

WASTE DISPOSAL

Dispose of consistent with Federal, State, and local regulations.

42

SECTION VII - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Store between 60 and 85°F (16-30°C)

43

SECTION VIII - TRANSPORTATION DATA

44 UNREGULATED BY D.O.T. <input checked="" type="checkbox"/>	U.S. D.O.T. PROPER SHIPPING NAME 47 NA
46 REGULATED BY D.O.T. <input type="checkbox"/>	U.S. D.O.T. HAZARD CLASS 48 NA
TRANSPORTATION EMERGENCY INFORMATION CHEM TREC 1-(800) 424-9300	LABEL(S) REQUIRED 50 NONE 51 NONE
49	FREIGHT CLASSIFICATION 52 Resin Compound Class #55 Item No. 46030
40	SPECIAL TRANSPORTATION NOTES 53 NONE

SECTION IX - COMMENTS

SPECIAL NOTE: THE FOAM PRODUCED IS AN ORGANIC MATERIAL AND MUST BE CONSIDERED AS COMBUSTIBLE. THE FOAM MUST NOT BE LEFT EXPOSED OR UNPROTECTED SHIELD THE FOAM FROM HEAT AND SPARKS WITH A THERMAL BARRIER.

34

SIGNATURE <u><i>[Signature]</i></u>	TITLE <u>Sales Service Manager</u>
REVISION DATE <u>1/15/93</u>	SENT TO ATTN: _____ DATE _____
SUPERSEDES _____	_____

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