



MATERIAL SAFETY DATA SHEET

D-114

VIBRATHANE® 8010D

Version: 1.1
DATE OF ISSUE: 01/09/2006
Date printed: 01/13/2006

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : VIBRATHANE® 8010D

Chemical name: Reaction product of a polyester with diphenylmethane diisocyanate (MDI)

Use of substance/preparation: Used in polyurethane manufacturing.

Supplier: Chemtura USA Corporation
Chemtura Corporation (Worldwide HQ)
199 Benson Road
Middlebury, CT 06749 USA

Emergency telephone number CHEMTREC (24 hours) 800-424-9300
Chemtura Corporation Emergency Response
(24 hours) 800-292-5898
For additional emergency telephone numbers see section 16 of the Safety Data Sheet.

Environmental, Health and Safety Department: 866-430-2775
Tel.: +44 (0) 1753.603.000

2. COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENT	% BY WEIGHT
Diphenylmethane 4,4'-diisocyanate (free, unreacted) CAS# 101-68-8	19

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

CAUTION!

MAY BE HARMFUL IF INHALED, SWALLOWED, OR ABSORBED THROUGH SKIN.
MAY CAUSE SKIN IRRITATION.
MAY CAUSE SKIN SENSITIZATION.
MAY CAUSE IRRITATION OF THE RESPIRATORY TRACT.
REPEATED EXPOSURE MAY CAUSE SENSITIZATION OF THE RESPIRATORY TRACT AND THE DEVELOPMENT OF AN ASTHMATIC REACTION ON FURTHER EXPOSURE.



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4. FIRST AID MEASURES

Swallowing

Drink promptly a large quantity of milk, egg white or gelatin solution. If not available, drink a large quantity of water., Obtain medical attention immediately.

Skin contact

Remove contaminated clothing. Wipe excess material from the skin. Wash skin with alcohol, followed by soap and water. Obtain medical attention.

Inhalation

Remove to fresh air., If breathing is difficult, administer oxygen., Obtain medical attention immediately.

Eye contact

Immediately flush eyes with water and continue washing for at least 15 minutes., Obtain medical attention if irritation persists.

Notes to physician

Treat for potential respiratory irritation.

ROUTES OF ENTRY: Eyes, skin, ingestion, inhalation, mist.

5. FIRE-FIGHTING MEASURES

Flash point: 399 °F 204 °C

Flammable limits

Lower limit: Not available
Upper limit: Not available

Autoignition

temperature: Not available

NFPA CLASSIFICATION

Health: 2	Flammability: 1	Reactivity: 1	Special provisions:
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Hazardous combustion products

Hydrocarbons.
Oxides of carbon.
Oxides of nitrogen.
Hydrogen cyanide.
Traces of isocyanates.

Special protective equipment for firefighters

Firefighters must be equipped to prevent breathing of vapors or products of combustion. Wear an approved self-contained breathing apparatus and protective clothing.



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Extinguishing media

Suitable: - water spray
 - dry chemical

Unusual fire and explosion hazards

Contamination of isocyanates with water could lead to dangerous pressure inside closed containers by generation of carbon dioxide.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Wear suitable protective equipment - especially respirators and eye protection.

Environmental precautions

Avoid discharge to sewers or to natural waters.

Methods for cleaning up

Absorb on inert material such as sand, earth, vermiculite.

Sweep up and collect in a suitable container for disposal.

Ventilate the area.

Stop the leak if it can be done without risk.

Supplies of suitable decontaminant should always be kept available. Contain and cover the spillage with solid decontaminant, wet earth or wet sand and leave to react for at least 30 minutes. Shovel residues into open-top drums and remove for further decontamination if necessary. Clean area with water. Test atmosphere for vapors to ensure safe working conditions before other personnel are allowed in the area. Suitable decontaminant solution: water 90-95%, concentrated ammonia solution 5-10%, liquid detergent 0,2-2%.

7. HANDLING AND STORAGE

HANDLING

Handling precautions

Use only with adequate ventilation.

STORAGE

Storage requirements

Keep container tightly closed., Store in a cool, dry and well-ventilated area., Store under nitrogen., Isocyanate based products react with water liberating carbon dioxide, which can lead to excessive pressure in closed containers, and form solid insoluble polymers, which can block pipes, valves, etc. Contact with copper or copper alloys and galvanised surfaces must be avoided and valves etc made of these materials must not be used in equipment for storing and handling diisocyanates. Do not store in open containers. Damaged or punctured drums should be emptied.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMIT VALUES

<u>Component</u>	<u>Country</u>	<u>Type</u>	<u>Value</u>	<u>Remark</u>
Diphenylmethane 4,4'-diisocyanate (free, unreacted)	USA	ACGIH	0.005	



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			ppm	
		PEL, OSHA	0.02 ppm	

No other exposure limits have been established

PERSONAL PROTECTION

Respiratory protection

Use self-contained breathing apparatus or supplied air if personnel exposure exceeds exposure limits.

Hand protection / protective gloves

Chemical resistant protective gloves

Eye protection

Safety glasses with side shields., Face shield or chemical splash goggles in case of splashing.

Skin protection

Wear protective clothing.

Other protective equipment

Eye bath, Safety shower

Industrial hygiene measures

Immediately remove contaminated clothing.

ENGINEERING CONTROLS

Further information

Provide for sufficient ventilation and/or exhaust.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Physical state Viscous liquid
 Odor Slight
 Odor threshold Not available

OTHER PROPERTIES

Boiling point at STP unless specified below. Not available
 Melting point at STP unless specified below. Not available
 Solidification 60 °F
 pH Not available
 Specific gravity (H2O=1) 1.15 - 1.22



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Solubility in water	Not available
Solubility in organic solvents	Tetrahydrofuran (THF), Methylene chloride, Dimethylformamide
Evaporation rate (Butyl Acetate=1)	Low
Partitioning coefficient	Not available
Flash point	399 °F 204 °C Method: Closed cup
Autoignition temperature	Not available
Upper explosion limits	Not available
Lower explosion limits	Not available
Percent volatiles	Not available
Reactive Isocyanate (NCO)	2.4 - 9.3 %

10. STABILITY AND REACTIVITY

Stability: Stable under recommended storage conditions. See also section 7.

Incompatible materials

Alcohols.
Strong oxidizing agents.
Water.

Hazardous combustion products

Hydrocarbons.
Oxides of carbon.
Oxides of nitrogen.
Hydrogen cyanide.
Traces of isocyanates.

11. TOXICOLOGICAL INFORMATION

GENERAL

This product is not tested. The following information is applicable to a component of this material:

Component data Diphenylmethane 4,4'-	LD50 - Rat Result: 31,690 mg/kg
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<u>diisocyanate (free, unreacted)</u> Acute toxicity - Swallowing:	
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<u>Component data</u> Diphenylmethane 4,4'-diisocyanate (free, unreacted) Acute toxicity - Skin absorption:	LD50 - Rabbit Remark: No data available.
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<u>Component data</u> Diphenylmethane 4,4'-diisocyanate (free, unreacted) Acute toxicity - Inhalation:	LC50 - Rat Result: 0.178 mg/l
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<u>Component data</u> Diphenylmethane 4,4'-diisocyanate (free, unreacted) Skin irritation - Skin contact:	Species: Rabbit Result: Severe irritation
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<u>Component data</u> Diphenylmethane 4,4'-diisocyanate (free, unreacted) Sensitization:	Species: Guinea pigs Result: Positive
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MUTAGENICITY

Component (Diphenylmethane 4,4'-diisocyanate (free, unreacted)): Ames Salmonella: Positive

12. ECOLOGICAL INFORMATION

This product is not tested.

The following information is based on a component of this material:

<u>Component ecotoxicology</u> Diphenylmethane 4,4'-diisocyanate (free, unreacted) Acute toxicity fish:	LC50 - Zebra fish (Brachydanio rerio) Result: > 1,000 mg/l Exposure time: 96 h
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<u>Component ecotoxicology</u> Diphenylmethane 4,4'-diisocyanate (free, unreacted) Microorganisms:	EC50 - Bacteriae Result: > 100 mg/l Exposure time: 3 h
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<u>Component ecotoxicology</u> Diphenylmethane 4,4'-diisocyanate (free, unreacted) Acute toxicity to aquatic invertebrates:	EC50 - Water flea (Daphnia magna) Result: > 1,000 mg/l Exposure time: 24 h
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13. DISPOSAL CONSIDERATIONS

General: In a well ventilated area, fill drums with several centimeters of water. Leave drum open and slowly shake and roll to allow water contact. Leave open to air for sufficient time to cure. Dispose in accordance with local and/or national regulations pertinent to polymeric waste. **WARNING!** Burning this material can produce toxic fumes!

14. TRANSPORT INFORMATION

DOT Classification

This product is not regulated by DOT.

IMDG Classification

This product is not regulated by IMDG.

ICAO Classification

This product is not regulated by ICAO.

15. REGULATORY INFORMATION

Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA) requires notification of the National Response Center of release of quantities of hazardous substances equal to or greater than the reportable quantities (RQ's) in 40CFR302.4.

Components present in this product at a level which could require reporting under the statute are:

Chemical name	CAS#	Max weight %
Diphenylmethane 4,4'-diisocyanate (free, unreacted)	101-68-8	19.00

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires emergency planning based on Threshold Planning Quantities (TPQ's) and release reporting based on Reportable Quantities (RQ's) in 40CFR355 (used for SARA 302 and 304).

Components present in this product at a level which could require reporting under the statute are:

Chemical name	CAS#	Max weight %
Diphenylmethane 4,4'-diisocyanate (free, unreacted)	101-68-8	19.00

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires submission of annual reports of release of toxic chemicals that appear in 40CFR372 (for SARA 313). This information must be included in MSDS's that are copied and distributed for this material.

Components present in this product at a level which could require reporting under the statute are:

Chemical name	CAS#	Max weight %
Diphenylmethane 4,4'-diisocyanate (free, unreacted)	101-68-8	19.00

Massachusetts Right-To-Know Substance List (MSL)--Hazardous Substances and Extraordinarily Hazardous Substances on the MSL must be identified when present in products.

Components present in this product at a level which could require reporting under the statute are:



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Chemical name	CAS#	Max weight %
Diphenylmethane 4,4'-diisocyanate (free, unreacted)	101-68-8	19.00

Pennsylvania Right-To-Know Hazardous Substance List--Hazardous Substances and Special Hazardous Substances on the list must be identified when present in products.

Components present in this product at a level which could require reporting under the statute are:

Chemical name	CAS#	Max weight %
Diphenylmethane 4,4'-diisocyanate (free, unreacted)	101-68-8	19.00

New Jersey Worker and Community Right-To-Know Act (Labeling Requirements)

Chemical name	CAS#	New Jersey TS Number
Hexanedioic acid, polymer with 1,4-butanediol 1,2-ethanediol and 1,1'-methylenebis[4-isocyanatobenzene]/	27083-55-2	

Diphenylmethane 4,4'-diisocyanate (free, unreacted)	101-68-8
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EPA Hazard Categories (SARA 311, 312): Immediate Health Hazard

CHEMICAL INVENTORY

Canada: This product is on the DSL.
Europe: This product is on the EINECS inventory.
United States: This product is on the TSCA inventory.
Australia: This product is on the AICS inventory.
China: This product is on the IECSC Inventory.
Korea: This product is listed on the Existing Chemicals List (ECL).

16. OTHER INFORMATION

FURTHER INFORMATION

MAY BE ON THE INVENTORY LIST BUT NOT NECESSARILY REGISTERED, (Korea, China, New Zealand) CONSULT REGULATORY SPECIALIST.

Emergency Telephone Numbers

Latin America:	All	+44 (0)208 762 8322
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HMIS RATING

Health: 2	Flammability: 1	Reactivity: 1	PPI: X
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STP	Standard temperature and pressure
W/W	0 (HMIS)
1 (HMIS)	Slight hazard
2 (HMIS)	Moderate hazard
3 (HMIS)	Serious hazard
4 (HMIS)	Severe hazard
X (HMIS)	Personal protection rating to be supplied by user depending on use conditions

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