

Date Prepared: 04/20/09
Supersedes: 04/17/09
Product Name: DuraFlow 350 pt B

ChemMasters

Material Safety Data Sheet

1. Chemical Product and Company Information

Product Name: DuraFlow Part B

ChemMasters
300 Edwards Street
Madison, Ohio 44057
440-428-2105

In Case of Emergency Contact:
CHEMTREC 800/424-9300

2. Hazards Identification

CAUTION

Causes Eye, Skin and Respiratory Tract Irritation

WHMIS Classification: Class D, Division 2B (Toxic)

Symbol: Stylized T

Potential Health Hazards - Acute

Eye: Causes irritation with symptoms of reddening, tearing and stinging. May cause temporary corneal injury.

Skin: Causes irritation with symptoms of reddening and itching. Persons previously sensitized can experience allergic skin reaction with symptoms of reddening, itching, swelling and rash.

Inhalation: Diisocyanate vapors or mist at concentrations above the TLV or PEL can irritate the respiratory tract with symptoms of coughing, sore throat, runny nose, chest discomfort, shortness of breath and reduced lung function. Persons with a preexisting, nonspecific bronchial hyperreactivity can respond to concentrations below the TLV and PEL with similar symptoms as well as asthma attack or asthma-like symptoms. Exposure well above the TLV or PEL may lead to bronchitis, bronchial spasm and pulmonary edema (fluid in lungs). Chemical or hypersensitivity pneumonitis, with flu-like symptoms (e.g. fever, chills) have also been reported. These symptoms can be delayed up to several hours after exposure. These effects are usually reversible.

Ingestion: May cause irritation; Symptoms may include abdominal pain, nausea, vomiting and diarrhea.

Potential Health Effects - Chronic:

Chronic Inhalation: As a result of previous repeated overexposures or a single large dose, certain individuals may develop sensitization to diisocyanates (asthma or asthma-like symptoms) that may cause them to react to a later exposure to diisocyanates at levels well below the TLV or PEL. This increased lung sensitivity can persist for weeks and in severe cases for several years. Sensitization can be permanent. Chronic overexposure to diisocyanates has also been reported to cause lung damage (including fibrosis, decrease in lung function) that may be permanent.

Chronic Skin: Prolonged contact can cause reddening, swelling, rash, and in some cases, skin sensitization.

Chronic Eye: Prolonged vapor contact may cause conjunctivitis.

Carcinogenicity:

NTP
NO

IARC Monographs
NO

OSHA Regulated
NO

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3. Composition / Information on Ingredients

Hazardous Components	CAS #	Exposure Limits			% by Wt
		OSHA(PEL/TWA)	ACGIH (TLV/TWA)	OTHER	
Polymeric Diphenylmethane	9016-87-9	NE	NE	—	36-46
4,4'-Diphenylmethane Diisocyanate	101-68-8	0.005 ppm	Ceiling Limit Value 0.02 ppm	—	22-23
Diphenylmethane Diisocyanate	26447-40-5	NA	NA	—	24-34

4. First Aid Measures

Eye: Immediately flush with plenty of water for 15 minutes. Get Medical Attention.

Skin: Remove contaminated Clothing. Wash with soap and water. Get Medical Attention if irritation develops.

Inhalation: Move to an area free from further exposure. Get Medical Attention immediately. Administer oxygen or artificial respiration as needed. Asthmatic symptoms may develop and may be immediate or delayed up to several hours. Extreme asthmatic reactions can be like threatening.

Ingestion: If swallowed, do not induce vomiting. Wash mouth out with water. Do not give anything by mouth to an unconscious person. Get Medical Attention.

SEEK MEDICAL ATTENTION IF SYMPTOMS PERSIST.

5. Fire Fighting Measures

Flash Point (method used): Not Applicable.

Flammable Limits (% volume in air): Lower = No data available Upper = No data available

Auto Ignition Temperature: No data available

Extinguishing Media: Media appropriate for surrounding fire.

Hazard Combustion Products: During a fire isocyanate vapors and other irritating, highly toxic gases may be generated by thermal decomposition or combustion. Exposure to heated diisocyanate can be extremely dangerous

Fire Fighting Instructions: Wear positive pressure, self-contained breathing apparatus. Closed containers may forcibly rupture under extreme heat or when contents are contaminated with water (CO₂ is formed). Use cold water spray to cool fire-exposed containers to minimize the risk of rupture. Large fires can be extinguished with large volumes of water applied from a safe distance, since reaction between water and hot diisocyanate can be vigorous.

6. Accidental Release Measures

Spill: Contain spilled material by diking. Absorb with inert material, then place in chemical waste container for later disposal. Keep spills out of municipal sewers and open bodies of water.

7. Handling and Storage

Handling: Always use good industrial hygiene practices and safety guidelines.

Storage: Store material in its original container. Keep containers tightly closed when not in use. Protect from freezing.

8. Exposure Controls / Personal Protection

Exposure Controls: Mechanical exhaust is recommended for indoor use.

Personal Protection: Safety glasses and rubber gloves should be worn to minimize contact with this material. Use of a NIOSH approved vapor respirator is recommended when chance of mist exists. A source of clean water should be available in work area for flushing eyes and skin.

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9. Physical and Chemical Properties

Appearance: Milky white liquid of water consistency

Odor: Mild odor

Boiling Point: 212°F Similar to water

Melting Point: Not applicable

Vapor Pressure (mm/Hg): No Data Available

Vapor Density (Air = 1): <1.0

Solubility in Water: 100%

Specific Gravity (H₂O = 1): 1.0

Evaporation Rate (n-Butyl Acetate = 1): <1.0

10. Stability and Reactivity

Chemical Stability: Stable under normal conditions

Conditions to Avoid: Contact with moisture/water or extreme heat (350 F, 177 C) may cause polymerization.

Incompatibility: Contact with water, amines, strong bases, alcohols and copper alloys.

Hazardous Decomposition or By-products: May yield Hydrogen Cyanide, Isocyanate, Isocyanic Acid, dense black smoke, carbon monoxide, nitrogen oxides and carbon dioxide.

Hazardous Polymerization: Will not occur

11. Toxicological Information

Acute Oral Toxicity LD₅₀: >2,000 mg/kg (rat, Male/Female)

Acute Inhalation Toxicity LC₅₀: 490 mg/m³, aerosol, 4 h (Rat)

Skin Irritation: Rabbit, Slighty irritating

12. Ecological Information

Biodegradation: 0%, Exposure time: 28 Days

13. Disposal Considerations

Dispose of in accordance with all federal, state, and local regulations. If uncertain of local requirements, contact the proper environmental authorities for disposal.

This material does not meet RCRA's characteristic definition of reactivity, and is listed in 40 CFR 261.33.

14. Transportation Information

Land Transport (DOT): When in individual containers of less than the Reportable Quantity (RQ), this material ships as non-regulated.

Sea Transport (IMDG): Non-Regulated

Air Transport (ICAO/IATA): Non-Regulated

Land Transport (DOT/RSPA): If individual containers exceed the Reportable Quantity: 15,625 lbs.

Proper shipping name: Other regulated substances, liquid, n.o.s. (contains 4,4-Diphenylmethane Diisocyanate (MDI))

Hazard Class: 9

UN/NA: NA3082

Packaging Group: III

Hazard Label: Class 9

Reportable Quantity: 15,625 lbs.

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15. Regulatory Information

OSHA: This material is hazardous under the OSHA Hazard Communication Standard.

CERCLA Reportable Quantity: 5000 lbs.

SARA Title III:

Section 311/312 hazard categories: Acute health, delayed health

Section 313 reportable ingredients:

Components	CAS #	Maximum %
Polymeric Diphenylmethane	9016-87-9	46
4,4'-Diphenylmethane Diisocyanate	101-68-8	23

16. Other Information

MSDS Status: Revised 4/20/09

Industrial Abbreviation Legend on page 4 of this MSDS.

Industrial Abbreviation Legend

ACGIH	American Conference of Governmental Industrial Hygienists	mg/m ³	milligrams per cubic meter
CAA	Clean Air Act (EPA)	NIOSH	National Institute for Occupational Safety and Health
CERCLA	Comprehensive Environmental Response, Compensation & Liability Act of 1980 (Superfund) (EPA)	NTP	National Toxicology Program
CNS	Central Nervous System	OSHA	Occupational Safety and Health Administration
CWA	Clean Water Act (EPA)	PEL	Permissible Exposure Limit
DOT	Department of Transportation	ppm	parts per million
EPA	Environmental Protection Agency	RCRA	Resource Conservation and Recovery Act (EPA)
g/kg	grams per kilogram	SARA	EPA's Superfund Amendment and Reauthorization Act (EPA)
IARC	Internal Agency for Research on Cancer	STEL	Short-Term Exposure Limit, ACGIH terminology
LC50	Lethal Concentration in which 50% of the test animals are expected to die	TLV	Threshold Limit Value
LD50	Lethal Dose in which 50% of the test animals are expected to die	TWA	Time-Weighted Average

THIS PRODUCT IS FORMULATED AND LABELED FOR INDUSTRIAL AND COMMERCIAL APPLICATION ONLY

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