

AsahiKASEI

ASAHI KASEI CHEMICALS

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name : DURANATE MHG-80B

General Use : Polyurethane coatings

Product Description : Polyisocyanate

Manufacturer's Name : Asahi Kasei Chemicals Corporation

Address (Number, Street, City, State, and ZIP Code):

Hibiya-Mitsui Bldg., 1-2, Yuraku-Cho 1-Chome, Chiyoda-Ku, Tokyo, 100-8440, Japan

Telephone Numbers: +81-3-3507-2433 (phone), +81-3-3507-2419 (fax)

Emergency Telephone Numbers :

(Local) See "LOCAL CONTACT" at the last page of the MSDS.

(Japan) +81-3-3507-2433 Asahi Kasei Chemicals Corporation
Performance Coating Materials Division

2. COMPOSITION/INFORMATION ON INGREDIENTS

Components	Wt% ^a	CAS#	OSHA PEL (2006)	ACGIH TLV (2006)
HDI ^b polyisocyanate	80	Not listed	Not established	Not established
n-Butyl acetate	20	123-86-4	150ppm TWA	150ppm TWA
HDI ^b	≤ 0.5	822-06-0	Not established	0.005ppm TWA

^a These values show typical ones only, and not to be used as specifications.

^b Hexamethylene diisocyanate.

3. HAZARDS IDENTIFICATION

Flammable liquid. Can release vapors that form explosive mixtures at temperatures above flash point.

The product may cause sensitisation (allergy) through skin contact. Vapors may cause irritation of eyes, nose and throat. Inhalation may cause toxic symptoms.

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4. FIRST AID MEASURES

Inhalation: Move the patient to fresh air. For signs of toxicity, including irritation of the airways, and difficulty in breathing, call for medical attention as soon as possible.

If not breathing, give artificial respiration.

Skin contact: Remove contaminated clothing and shoes. Wash affected areas with large amount of water and soap. Get medical aid if irritation develops.

Eye contact: Immediately flush eyes with plenty of running water for at least 15 minutes, occasionally holding eyelids apart.

Get medical attention if irritation develops.

Ingestion: Give 2-4 cupfuls of water or milk. Get medical aid immediately.

Never give anything by mouth to an unconscious person.

Do not induce vomiting unless instructed by medical personnel.

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Advice for medical personnel: Give symptomatic treatment and supportive therapy.

5. FIRE FIGHTING MEASURES

Extinguishing media: For small fires, use dry chemical, carbon dioxide, water spray.

For large fires, use water spray.

Unsuitable extinguishing media: Note that product is insoluble in water.

Water jets may spread fire.

Special fire precautions: Use water spray to keep fire exposed containers cool.

During a fire, irritating and highly toxic gases such as carbon monoxide, oxides of nitrogen, isocyanate vapor and traces of hydrogen cyanide may be generated by thermal decomposition or combustion.

Protection of firefighters: Wear full protective clothing and self-contained breathing apparatus.

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6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Wear appropriate personal protective equipment as specified in Section 8.

Environmental precautions: Do not allow significant quantities to enter drains or surface water.

Methods for cleaning up: Ventilate area of leak or spill. Remove all sources of ignition. Use non-sparking tools and equipment. Evacuate unnecessary and unprotected personnel. Contain and recover liquid when possible. Collect liquid in an appropriate container or absorb with an inert materials. Do not flush to sewer. For small quantities, wipe off with cloth or paper, and wash with water and detergent. For large quantities, recover by taking up mechanically or with an inert absorbent material such as waste cloth, dry sand, or earth. Wash residue with water and detergent. Follow prescribed procedures for responding to larger spills and reporting to appropriate authorities.

7. HANDLING AND STORAGE

Handling: Workshops should be well ventilated. Avoid contact with skin and eyes. Avoid ingestion and inhalation. Avoid contact with heat, sparks and flame. Use proper bonding and grounding procedures to reduce potential for static discharge. Use spark-proof tools and explosion-proof equipment.

Storage: Keep container tightly closed. Store in a cool, dry, well-ventilated area. Keep away from sources of ignition.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:

Handling in a closed room should be done with a closed container or in a place equipped with an adequate general or local exhaust ventilation.

Personal Protective Equipment:

Eyes : Wear appropriate protective eyeglasses or chemical safety goggles as described by European Standard EN166.

Skin (clothing): Wear appropriate protective clothing to European (EN) standards when handling large volumes. Protective gloves (recommended material: Viton) should be worn to prevent skin exposure. Manufacturer's guidance should be sought concerning breakthrough times.

Respirators: Follow the European Standard EN 149 approved respirator when vapour may be inhaled.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
Appearance:	Colorless to light yellow
Odor:	Sweetish, pleasant odor
Boiling Point	(n-Butyl acetate : 126 °C)
Vapor Pressure	(n-Butyl acetate : 10mmHg(20 °C))
Vapor Density (Air=1)	(n-Butyl acetate : 4.0)
Specific gravity (H ₂ O = 1):	1.06 (20 °C)
Melting point:	Not applicable
Evaporation rate (n-butyl acetate = 1):	Not applicable
Solubility in water:	Insoluble
Flash point (method used):	25 °C (Seta Closed-cup)
Flammable limits (n-butyl acetate) :	LEL 1.4 Vol%, UEL 7.5 Vol%.

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10. STABILITY AND REACTIVITY

Stability: Stable at room temperature in closed containers under normal storage and handling conditions.

Incompatibility: Compounds containing active hydrogens at high temperature.

Hazardous decomposition products: No hazardous decomposition products when stored and handled correctly.

Hazardous reactions: Exothermic reaction with amines and alcohols; reacts slowly with water forming CO₂, with possible risk in closed containers risk of bursting owing to increase of pressure.

11. TOXICOLOGICAL INFORMATION

Health hazards of HDI polyisocyanate

Skin sensitization : Sensitiser (LLNA;mouse)
Ames test : No indication of mutagenic effects

Health Hazards of n-Butyl acetate

Acute oral toxicity : LD₅₀ (rat) = 14g/kg
Eye irritation : Moderate irritant, 100 mg (rabbit)
Skin irritation : Moderate irritant, 500 mg, 24 h exposure (rabbit)
Inhalation : LC₅₀ (rat) = 390 ppm/4 h

Health Hazards of HDI

Acute eye irritation : Severely irritant
Acute dermal irritation : Severely irritant
Acute oral toxicity : LD₅₀ (rat) = 746 mg/kg
Acute dermal toxicity : LD₅₀ (rabbit) = 598 mg/kg
Inhalation : LC₅₀ (rat) = 310-350 mg/m³/4 h
Skin sensitization : Sensitizer
Respiratory sensitization: Sensitizer

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12. ECOLOGICAL INFORMATION

Mobility: The product is an insoluble liquid, and some components may float on water.

Persistence/degradability: No information available on the polyisocyanate.

n-Butyl acetate is readily biodegradable.

Bioaccumulation: No information available

Toxicity: The product is not classified as dangerous for the environment.

No information available on the polyisocyanate. n-Butyl acetate has toxicity value to the aquatic organisms of 10 – 100 ppm (LD₅₀: 10 - 100 mg/l or more),

Golden fish: LD₅₀: 71/141 mg/l

WGK numbers: n-butyl acetate, 1; HDI, 1; product expected to be 1.

Others: Butyl acetate exists in the aromatic component of red apples in nature.

Environmental Hazards of HDI

Biodegradation : Readily biodegradable(METI test)

Acute/Prolonged Toxicity to Fish : 96hrLC₀: ≥ 82.8 mg/l[Brachydanio rerio]

Acute Toxicity to Aquatic Invertebrate : 48hrEC₀: ≥ 89.1 mg/l [Daphnia magna]

Toxicity to Aquatic Plants e.g. Algae : 72hrEC₅₀: >77.4 mg/l [Scenedesmus subspicatus]

13. DISPOSAL CONSIDERATIONS

Incinerate in liquid state, or incinerate or landfill after solidified form.

Dispose the empty vessel after leaving it for 2 weeks or more after filling with water.

During that time do not cover the lid of the vessel filled with water because carbon dioxide will be generated

14. TRANSPORT INFORMATION

SEA TRANSPORT

IMDG

Class: 3

Packing Group: III

UN Number: 1993

Proper Shipping Name: Flammable Liquid, n. o. s.

Marine Pollutant: No

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15. REGULATORY INFORMATION

Ensure this material is in compliance with requirement and local regulations.

16. OTHER INFORMATION

MSDS STATUS : FIRST ISSUE, 11 Oct. 2006

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It relates only to the specific material designated herein, and does not relate to use in combination with any other material on in any process. Asahi Kasei Chemicals Corporation assumes no legal responsibility for use or reliance upon this information.

Local contact

Country	Company Name	Address	Telephone No.
			Facsimile No.
JAPAN	MARUBENI CHEMIX CORPORATION	MARUBENI BLDG, 10 TH FLOOR 4-2, OHTEMACHI 1-CHOME, C HIYODA-KU, TOKYO, JAPAN	TEL +81-3-3282-2435 FAX +81-3-3282-2392
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