



# SAFETY DATA SHEET

## 1. Identification

**Material name:** DURAL AQUA-FIL - 5 GAL UNIT - MTO  
**Material:** 043D 00

### Recommended use and restriction on use

**Recommended use:** Coatings  
**Restrictions on use:** Not known.

### Manufacturer/Importer/Supplier/Distributor Information

EUCLID CHEMICAL COMPANY  
19218 REDWOOD ROAD  
CLEVELAND OH 44110  
US

**Contact person:** EH&S Department  
**Telephone:** 216-531-9222  
**Emergency telephone number:** 1-800-424-9300 (US); 1-613-996-6666 (Canada)

## 2. Hazard(s) identification

### Hazard Classification

#### Health Hazards

Acute toxicity (Inhalation - dust and mist)	Category 4
Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2
Specific Target Organ Toxicity - Single Exposure	Category 3
Specific Target Organ Toxicity - Repeated Exposure	Category 2
Respiratory sensitizer	Category 1
Skin sensitizer	Category 1
Carcinogenicity	Category 2

#### Unknown toxicity - Health

Acute toxicity, oral	7 %
Acute toxicity, dermal	7 %
Acute toxicity, inhalation, vapor	100 %
Acute toxicity, inhalation, dust or mist	100 %

#### Unknown toxicity - Environment

Acute hazards to the aquatic environment	100 %
Chronic hazards to the aquatic environment	100 %

### Label Elements

**Hazard Symbol:****Signal Word:**

Danger

**Hazard Statement:**

Harmful if inhaled.  
Causes skin irritation.  
Causes serious eye irritation.  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
May cause an allergic skin reaction.  
Suspected of causing cancer.  
May cause respiratory irritation.  
May cause damage to organs through prolonged or repeated exposure.

**Precautionary Statement:****Prevention:**

Use only outdoors or in a well-ventilated area. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. [In case of inadequate ventilation] wear respiratory protection. Contaminated work clothing must not be allowed out of the workplace. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Do not breathe dust or mists.

**Response:**

IF INHALED: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER/doctor. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Call a POISON CENTER/doctor if you feel unwell. Specific treatment (see this label). Wash contaminated clothing before reuse.

**Storage:**

Store locked up. Store in well-ventilated place. Keep container tightly closed.

**Disposal:**

Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**Other hazards which do not result in GHS classification:**

None.

**3. Composition/information on ingredients****Mixtures**



Chemical Identity	CAS number	Content in percent (%)*
4,4'-Methylene bis(phenylisocyanate)	101-68-8	5 - 10%
Diphenylmethane diisocyanate	26447-40-5	5 - 10%

\* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

#### 4. First-aid measures

- Ingestion:** Call a POISON CENTER/doctor/.../if you feel unwell. Rinse mouth.
- Inhalation:** Call a physician or poison control center immediately. If breathing stops, provide artificial respiration. Move to fresh air. If breathing is difficult, give oxygen.
- Skin Contact:** Get medical attention. Destroy or thoroughly clean contaminated shoes. Immediately remove contaminated clothing and shoes and wash skin with soap and plenty of water. If skin irritation or an allergic skin reaction develops, get medical attention.
- Eye contact:** Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.

#### Most important symptoms/effects, acute and delayed

- Symptoms:** Prolonged or repeated contact with skin may cause redness, itching, irritation and eczema/chapping. Extreme irritation of eyes and mucous membranes, including burning and tearing. Respiratory tract irritation.

#### Indication of immediate medical attention and special treatment needed

- Treatment:** Symptoms may be delayed.

#### 5. Fire-fighting measures

- General Fire Hazards:** No unusual fire or explosion hazards noted.

#### Suitable (and unsuitable) extinguishing media

**Suitable extinguishing media:** Use fire-extinguishing media appropriate for surrounding materials.

**Unsuitable extinguishing media:** Do not use water jet as an extinguisher, as this will spread the fire.

- Specific hazards arising from the chemical:** During fire, gases hazardous to health may be formed.

#### Special protective equipment and precautions for firefighters

- Special fire fighting procedures:** No data available.



**Special protective equipment for fire-fighters:** Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**6. Accidental release measures**

**Personal precautions, protective equipment and emergency procedures:** Ventilate closed spaces before entering them. Evacuate area. See Section 8 of the SDS for Personal Protective Equipment. Keep upwind. Keep unauthorized personnel away. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

**Methods and material for containment and cleaning up:** Dam and absorb spillages with sand, earth or other non-combustible material. Collect spillage in containers, seal securely and deliver for disposal according to local regulations.

**Notification Procedures:** In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

**Environmental Precautions:** Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so.

**7. Handling and storage**

**Precautions for safe handling:** Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin. Wash hands thoroughly after handling. Avoid contact with eyes, skin, and clothing.

**Conditions for safe storage, including any incompatibilities:** Store locked up.

**8. Exposure controls/personal protection**

**Control Parameters  
Occupational Exposure Limits**

Chemical Identity	type	Exposure Limit Values	Source
4,4'-Methylene bis(phenylisocyanate)	TWA	0.005 ppm	US. ACGIH Threshold Limit Values (2011)
	Ceiling	0.02 ppm 0.2 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)



Chemical name	type	Exposure Limit Values	Source
4,4'-Methylene bis(phenylisocyanate)	CEILING	0.01 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	TWA	0.005 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
4,4'-Methylene bis(phenylisocyanate)	TWAEV	0.005 ppm	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
	CEV	0.02 ppm	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
4,4'-Methylene bis(phenylisocyanate)	TWA	0.005 ppm      0.051 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Diphenylmethane diisocyanate	TWA	0.005 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	CEILING	0.01 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)

**Appropriate Engineering Controls**

Observe good industrial hygiene practices. Observe occupational exposure limits and minimize the risk of inhalation of vapors and mist. Mechanical ventilation or local exhaust ventilation may be required.

**Individual protection measures, such as personal protective equipment****General information:**

Provide easy access to water supply and eye wash facilities. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

**Eye/face protection:**

Wear safety glasses with side shields (or goggles).

**Skin Protection****Hand Protection:**

Use suitable protective gloves if risk of skin contact.

**Other:**

Wear chemical-resistant gloves, footwear, and protective clothing appropriate for the risk of exposure. Contact health and safety professional



or manufacturer for specific information.

**Respiratory Protection:** If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information.

**Hygiene measures:** Observe good industrial hygiene practices. Wash hands before breaks and immediately after handling the product. Wash contaminated clothing before reuse. Avoid contact with skin. Contaminated work clothing should not be allowed out of the workplace.

## 9. Physical and chemical properties

### Appearance

<b>Physical state:</b>	liquid
<b>Form:</b>	liquid
<b>Color:</b>	Brown
<b>Odor:</b>	Mild petroleum/solvent
<b>Odor threshold:</b>	No data available.
<b>pH:</b>	No data available.
<b>Melting point/freezing point:</b>	No data available.
<b>Initial boiling point and boiling range:</b>	No data available.
<b>Flash Point:</b>	> 93 °C > 200 °F(Closed Cup)
<b>Evaporation rate:</b>	Slower than Ether
<b>Flammability (solid, gas):</b>	No
<b>Upper/lower limit on flammability or explosive limits</b>	
<b>Flammability limit - upper (%):</b>	No data available.
<b>Flammability limit - lower (%):</b>	No data available.
<b>Explosive limit - upper (%):</b>	No data available.
<b>Explosive limit - lower (%):</b>	No data available.
<b>Vapor pressure:</b>	No data available.
<b>Vapor density:</b>	Vapors are heavier than air and may travel along the floor and in the bottom of containers.
<b>Relative density:</b>	1.16
<b>Solubility(ies)</b>	
<b>Solubility in water:</b>	Practically Insoluble
<b>Solubility (other):</b>	No data available.
<b>Partition coefficient (n-octanol/water):</b>	No data available.
<b>Auto-ignition temperature:</b>	No data available.
<b>Decomposition temperature:</b>	No data available.
<b>Viscosity:</b>	No data available.

**10. Stability and reactivity**

<b>Reactivity:</b>	No data available.
<b>Chemical Stability:</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions:</b>	No data available.
<b>Conditions to avoid:</b>	Avoid heat or contamination.
<b>Incompatible Materials:</b>	Alcohols. Amines. Strong acids. Strong bases. Water, moisture.
<b>Hazardous Decomposition Products:</b>	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

**11. Toxicological information****Information on likely routes of exposure**

<b>Ingestion:</b>	May be ingested by accident. Ingestion may cause irritation and malaise.
<b>Inhalation:</b>	In high concentrations, vapors, fumes or mists may irritate nose, throat and mucus membranes.
<b>Skin Contact:</b>	Causes skin irritation. May cause an allergic skin reaction.
<b>Eye contact:</b>	Eye contact is possible and should be avoided.

**Information on toxicological effects****Acute toxicity (list all possible routes of exposure)**

<b>Oral Product:</b>	ATEmix: 33,333.33 mg/kg
<b>Dermal Product:</b>	No data available.
<b>Inhalation Product:</b>	No data available.
<b>Specified substance(s):</b> 4,4'-Methylene bis(phenylisocyanate)	LC 50 (Rat, 4 h): 0.49 mg/l
<b>Repeated dose toxicity Product:</b>	No data available.

<b>Skin Corrosion/Irritation Product:</b>	No data available.
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**Specified substance(s):**

4,4'-Methylene bis(phenylisocyanate) in vivo (Rabbit): Read-across based on grouping of substances (category approach), Key study

**Serious Eye Damage/Eye Irritation**

**Product:** No data available.

**Specified substance(s):**

4,4'-Methylene bis(phenylisocyanate) in vivo (Rabbit, 24 - 72 hrs): Not irritating

**Respiratory or Skin Sensitization**

**Product:** May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
May cause sensitization by inhalation.

**Carcinogenicity**

**Product:** Suspected of causing cancer.

**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:**

No carcinogenic components identified

**US. National Toxicology Program (NTP) Report on Carcinogens:**

No carcinogenic components identified

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):**

No carcinogenic components identified

**Germ Cell Mutagenicity****In vitro**

**Product:** No data available.

**In vivo**

**Product:** No data available.

**Reproductive toxicity**

**Product:** No data available.

**Specific Target Organ Toxicity - Single Exposure**

**Product:** No data available.

**Specific Target Organ Toxicity - Repeated Exposure**

**Product:** No data available.

**Aspiration Hazard**

**Product:** No data available.

**Other effects:** No data available.





## 12. Ecological information

### Ecotoxicity:

#### Acute hazards to the aquatic environment:

##### Fish

Product: No data available.

##### Aquatic Invertebrates

Product: No data available.

#### Chronic hazards to the aquatic environment:

##### Fish

Product: No data available.

##### Aquatic Invertebrates

Product: No data available.

##### Toxicity to Aquatic Plants

Product: No data available.

### Persistence and Degradability

##### Biodegradation

Product: No data available.

##### BOD/COD Ratio

Product: No data available.

### Bioaccumulative Potential

##### Bioconcentration Factor (BCF)

Product: No data available.

##### Partition Coefficient n-octanol / water (log Kow)

Product: No data available.

Mobility in Soil: No data available.

Other Adverse Effects: No data available.

## 13. Disposal considerations



**Disposal instructions:** Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**Contaminated Packaging:** No data available.

#### 14. Transport information

**TDG:**

Not Regulated

**CFR / DOT:**

Not Regulated

**IMDG:**

Not Regulated

#### 15. Regulatory information

##### US Federal Regulations

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

None present or none present in regulated quantities.

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

None present or none present in regulated quantities.

**CERCLA Hazardous Substance List (40 CFR 302.4):**

<u>Chemical Identity</u>	<u>Reportable quantity</u>
4,4'-Methylene bis(phenylisocyanate)	5000 lbs.

##### Superfund Amendments and Reauthorization Act of 1986 (SARA)

**Hazard categories**

Immediate (Acute) Health Hazards

Delayed (Chronic) Health Hazard

**SARA 302 Extremely Hazardous Substance**

None present or none present in regulated quantities.

**SARA 304 Emergency Release Notification**

<u>Chemical Identity</u>	<u>Reportable quantity</u>
4,4'-Methylene bis(phenylisocyanate)	5000 lbs.

**SARA 311/312 Hazardous Chemical**

<u>Chemical Identity</u>	<u>Threshold Planning Quantity</u>
4,4'-Methylene bis(phenylisocyanate)	500 lbs
Diphenylmethane diisocyanate	500 lbs

**SARA 313 (TRI Reporting)**

<u>Chemical Identity</u>
4,4'-Methylene bis(phenylisocyanate)

**Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)**

None present or none present in regulated quantities.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):**

None present or none present in regulated quantities.

**US State Regulations****US. California Proposition 65**

No ingredient regulated by CA Prop 65 present.

**US. New Jersey Worker and Community Right-to-Know Act**

<u>Chemical Identity</u>
4,4'-Methylene bis(phenylisocyanate)
Diphenylmethane diisocyanate

**US. Massachusetts RTK - Substance List**

<u>Chemical Identity</u>
4,4'-Methylene bis(phenylisocyanate)

**US. Pennsylvania RTK - Hazardous Substances**

<u>Chemical Identity</u>
4,4'-Methylene bis(phenylisocyanate)

**US. Rhode Island RTK**

<u>Chemical Identity</u>
4,4'-Methylene bis(phenylisocyanate)

**Other Regulations:**

<b>Regulatory VOC (less water and exempt solvent):</b>	268 g/l
<b>VOC Method 310:</b>	23.11 %

**Inventory Status:**

Australia AICS:

All components in this product are listed on or exempt from the Inventory.

Canada DSL Inventory List:

All components in this product are listed on or exempt from the Inventory.



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EINECS, ELINCS or NLP:	One or more components in this product are not listed on or exempt from the Inventory.
Japan (ENCS) List:	One or more components in this product are not listed on or exempt from the Inventory.
China Inv. Existing Chemical Substances:	All components in this product are listed on or exempt from the Inventory.
Korea Existing Chemicals Inv. (KECI):	All components in this product are listed on or exempt from the Inventory.
Canada NDSL Inventory:	One or more components in this product are not listed on or exempt from the Inventory.
Philippines PICCS:	All components in this product are listed on or exempt from the Inventory.
US TSCA Inventory:	All components in this product are listed on or exempt from the Inventory.
New Zealand Inventory of Chemicals:	All components in this product are listed on or exempt from the Inventory.
Japan ISHL Listing:	One or more components in this product are not listed on or exempt from the Inventory.
Japan Pharmacopoeia Listing:	One or more components in this product are not listed on or exempt from the Inventory.

<b>16. Other information, including date of preparation or last revision</b>
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**Revision Date:** 04/21/2016

**Version #:** 2.0

**Further Information:** No data available.

**Disclaimer:** For Industrial Use Only. Keep out of Reach of Children. The hazard information herein is offered solely for the consideration of the user, subject to their own investigation of compliance with applicable regulations, including the safe use of the product under every foreseeable condition.