



The Euclid Chemical Company

DURAL AQUA-DAM 200F - 12/22 OZ D-CTG

Version 2.

Print Date 12/04/2009

REVISION DATE: 05/22/2009

This is a kit that contains the following components:

DURAL AQUA-DAM 200F PART A

DURAL AQUA-DAM 200F PART B

**DURAL AQUA-DAM 200F PART A**Version 2.
REVISION DATE: 05/22/2009

Print Date 12/04/2009

SECTION 1 - PRODUCT IDENTIFICATION

Trade name : DURAL AQUA-DAM 200F PART A
Product code : 043C 96

COMPANY : Euclid Chemical Company
19218 Redwood Road
Cleveland, OH 44110

Telephone : 1-800-321-7628
Emergency Phone: : U.S. only: 1-800-424-9300
International Users Call Collect: 1-703-527-3887

Product use : Coating Curative

SECTION 2 - HAZARDS IDENTIFICATION**Emergency Overview**

Brown. Liquid. Vapor and/or mist may irritate nose and throat. May cause allergic respiratory sensitization. Move to fresh air. If required, artificial respiration or administration of oxygen can be performed by trained personnel. Leave area to breathe fresh air. Avoid further overexposure. If symptoms persist, get medical attention.

Acute Potential Health Effects/ Routes of Entry

Inhalation : Vapor and/or mist may irritate nose and throat. May cause allergic respiratory sensitization.

Eyes : Vapor and/or mist may cause eye irritation. May cause sensitization.

Ingestion : May cause irritation to the mouth, throat and stomach. May cause gastrointestinal irritation, nausea, and vomiting.

Skin : May cause sensitization resulting in irritation, itching and redness.

Aggravated Medical Conditions

Pre-existing eye, skin and respiratory disorders may be aggravated by exposure.

Chronic Health Effects

Overexposure may cause dermatitis, asthma, skin and respiratory sensitization and decreased lung function. Fillers are encapsulated and not expected to be released from product under normal conditions of use.

Target Organs: Lung, Skin, Eye

SECTION 3 - PRODUCT COMPOSITION

Chemical Name	CAS-No.	Weight %
Polymethylene polyphenyl isocyanate	9016-87-9	40.0 - 70.0
4,4'-Methylene bis(phenylisocyanate)	101-68-8	40.0 - 70.0

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SECTION 4 - FIRST AID MEASURES

Get immediate medical attention for any significant overexposure.

- Inhalation : Move to fresh air. If required, artificial respiration or administration of oxygen can be performed by trained personnel. Leave area to breathe fresh air. Avoid further overexposure. If symptoms persist, get medical attention.
- Eye contact : Flush with water for at least 15 minutes while holding eye lids apart. Get medical attention immediately.
- Skin contact : Wash area of contact thoroughly with hand cleaner followed by soap and water. If irritation, rash or other disorders develop, get medical attention immediately.
- Ingestion : Do not induce vomiting unless advised by a physician. Call nearest Poison Control Center or Physician immediately.

SECTION 5 - FIRE FIGHTING MEASURES

- Flash point : > 200 °F, > 93 °C
- Method : Closed Cup
- Lower explosion limit : Not available.
- Upper explosion limit : Not available.
- Autoignition temperature : Not available.
- Extinguishing media : If water fog is ineffective, use carbon dioxide, dry chemical or foam.
- Hazardous combustion products : Carbon monoxide and carbon dioxide can form. Smoke, fumes. Hydrocyanic acid and nitrogen oxides can form.
- Protective equipment for firefighters : Use accepted fire fighting techniques. Wear full firefighting protective clothing, including self-contained breathing apparatus (SCBA).
- Fire and explosion conditions : This product not expected to ignite under normal conditions of use.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Use appropriate protective equipment. Avoid contact with material. Absorb spill in sand, earth or other suitable material. Transfer to appropriate container for disposal.

SECTION 7 - HANDLING AND STORAGE

Store under normal warehouse conditions. Change soiled work clothes frequently. Clean hands thoroughly after handling. Prevent inhalation of vapor, ingestion, and contact with skin eyes and clothing. Keep container closed when not in use. Precautions also apply to emptied containers.

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SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION**Personal protection equipment**

- Respiratory protection : Use full engineering controls before relying on personal protective equipment. Wear appropriate, properly fitted air purifying respirator with combination particulate filter and vapor/gas removing cartridge when airborne contaminant level(s) exceed exposure limits indicated on the MSDS, or product is spray applied.
- Hand protection : Use suitable impervious nitrile or neoprene gloves and protective apparel to reduce exposure.
- Eye protection : Wear appropriate eye protection. Wear chemical safety goggles and/or face shield to prevent eye contact. Do not wear contact lenses. Do not touch eyes with contaminated body parts or materials. Have eye washing facilities readily available.
- Skin and body protection : Prevent contact with shoes and clothing.
- Protective measures : Use professional judgment in the selection, care, and use.
- Engineering measures : Use only in well ventilated areas. Provide maximum ventilation in enclosed areas. Use general ventilation and/ or local exhaust to reduce the airborne contaminant concentration below the exposure limit listed in the MSDS

Exposure Limits

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Regulation</u>	<u>Limit</u>	<u>Form</u>
4,4'-Methylene bis(phenylisocyanate)	101-68-8	ACGIH TWA:	0.005 ppm	

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

- Form : Liquid
- Color : Brown
- Odor : Characteristic
- pH : Not available.
- Vapour pressure : < 0.0001 mmHg at 25 °C
- Vapor density : Heavier than air
- Melting point/range : Not available.
- Freezing point : Not available.
- Boiling point/range : > 572 °F, > 300 °C
- Water solubility : Negligible
- Specific Gravity : 1.205 +/- 0.025
- % Volatile Weight : 100.0 %

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SECTION 10 - REACTIVITY / STABILITY

Substances to avoid : Strong acids.Strong bases.Amines.Water or moisture.Alcohols.
Stability : Material is stable under normal storage, handling, and use.
Hazardous polymerization : Will not occur under normal conditions.

SECTION 11 - TOXICOLOGICAL INFORMATION

4,4'-Methylene bis(phenylisocyanate), CAS-No.: 101-68-8
Acute inhalation toxicity (LC-50) 0.369 mg/l for 4 h (Rat) 0.38 mg/l for 4 h (Rat)

SECTION 12 - ECOLOGICAL INFORMATION

No Data Available

SECTION 13 - DISPOSAL CONSIDERATIONS

Disposal Method : Subject to hazardous waste treatment, storage, and disposal requirements under RCRA. Recycle or incinerate waste at EPA approved facility or dispose of in compliance with federal, state and local regulations.

SECTION 14 - TRANSPORTATION / SHIPPING DATA

TDG / DOT Shipping Description:
NOT REGULATED

SECTION 15 - REGULATORY INFORMATION**North American Inventories:**

All components are listed or exempt from the TSCA inventory.

This product or its components are listed on, or exempt from the Canadian Domestic Substances List.

U.S. Federal Regulations:

SARA 313 Components : Polymethylene polyphenyl isocyanate 9016-87-9
4,4'-Methylene bis(phenylisocyanate) 101-68-8

SARA 311/312 Hazards : Acute Health Hazard

OSHA Hazardous Components :

Polymethylene polyphenyl isocyanate 9016-87-9
4,4'-Methylene bis(phenylisocyanate) 101-68-8

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OSHA Status: Considered : Irritant
hazardous based on the
following criteria:

OSHA Flammability : Not Regulated

When appropriately mixed with the other part, product has a VOC less water and exempt solvent of:
< 50 g/l

U.S. State Regulations:

MASS RTK Components : 4,4'-Methylene bis(phenylisocyanate) 101-68-8

Penn RTK Components : Polymethylene polyphenyl isocyanate 9016-87-9
4,4'-Methylene bis(phenylisocyanate) 101-68-8

NJ RTK Components : Polymethylene polyphenyl isocyanate 9016-87-9
4,4'-Methylene bis(phenylisocyanate) 101-68-8

WARNING! Contains chemicals known to the State of California to cause cancer, birth defects and/or other reproductive harm:
None known.

SECTION 16 - OTHER INFORMATION**HMIS Rating :**

Health	2
Flammability	1
Reactivity	1
PPE	

0 = Minimum
1 = Slight
2 = Moderate
3 = Serious
4 = Severe

Further information:

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.

Prepared by: Rich Mikol

Legend

ACGIH - American Conference of Governmental Hygienists
CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act
DOT - Department of Transportation
DSL - Domestic Substance List
EPA - Environmental Protection Agency
HMIS - Hazardous Materials Information System
IARC - International Agency for Research on Cancer
MSHA - Mine Safety Health Administration
NDSL - Non-Domestic Substance List
NIOSH - National Institute for Occupational Safety and Health
NTP - National Toxicology Program

PEL - Permissible Exposure Limit
RCRA - Resource Conservation and Recovery Act
RTK - Right To Know
SARA - Superfund Amendments and Reauthorization Act
STEL - Short Term Exposure Limit
TLV - Threshold Limit Value
TSCA - Toxic Substances Control Act
TWA - Time Weighted Average
V - Volume
VOC - Volatile Organic Compound
WHMIS - Workplace Hazardous Materials Information



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OSHA - Occupational Safety and Health Administration

System

**DURAL AQUA-DAM 200F PART B**Version 2.
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SECTION 1 - PRODUCT IDENTIFICATION

Trade name : DURAL AQUA-DAM 200F PART B
Product code : 043C 96

COMPANY : Euclid Chemical Company
19218 Redwood Road
Cleveland, OH 44110

Telephone : 1-800-321-7628
Emergency Phone: : U.S. only: 1-800-424-9300
International Users Call Collect: 1-703-527-3887

Product use : Curative

SECTION 2 - HAZARDS IDENTIFICATION**Emergency Overview**

Amber. Liquid solution. May cause slight irritation to the respiratory system. Leave area to breathe fresh air. Avoid further overexposure. If symptoms persist, get medical attention.

Acute Potential Health Effects/ Routes of Entry

Inhalation : May cause slight irritation to the respiratory system.
Eyes : Vapors or liquid may cause tearing, blurred vision, severe irritation, and possible chemical burns.
Ingestion : May cause irritation to the mouth, throat and stomach. May cause chemical burns to stomach, mouth, nose, and throat.
Skin : May cause moderate irritation. May cause sensitization resulting in irritation, itching and redness.

Aggravated Medical Conditions

Pre-existing eye, skin and respiratory disorders may be aggravated by exposure.

Chronic Health Effects

May aggravate persons sensitized to amines. Prolonged skin contact may cause irritation, burns or dermatitis. Polyamines are reported to cause liver and kidney damage in experimental animals on prolonged and repeated overexposure. In animal studies, prolonged or repeated exposure to ethylene glycol (or its components) has been suggested as a cause of reproductive effects and kidney and liver damage. It has caused birth defect in animal studies at high oral doses. Prolonged and repeated to ethylene glycol (or its components) has been suggested as a cause of kidney and liver damage in humans. Ethylene glycol is not expected to cause cancer in humans, since it did not cause cancer in laboratory animals and is not listed as a carcinogen by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), or the Occupational Safety and Health Administration (OSHA). Fillers are encapsulated and not expected to be released from product under normal conditions of use.

Target Organs: Skin, Eye, Lung

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SECTION 3 - PRODUCT COMPOSITION

Chemical Name	CAS-No.	Weight %
Benzenedicarboxylic acid Dimethyl Ester	NJ TSRN# 51721300-6238P	30.0 - 60.0
Polyether Polyol	NJ TSRN# 51721300-6236P	15.0 - 40.0
Polyether Polyol	NJ TSRN# 51721300-5518P	15.0 - 40.0
Polyether Polyol	NJ TSRN# 51721300-6237P	15.0 - 40.0
Pentamethyldiethylenetriamine	3030-47-5	3.0 - 7.0
Diethylene glycol	111-46-6	1.0 - 5.0
Ethylene glycol	107-21-1	1.0 - 5.0

SECTION 4 - FIRST AID MEASURES

Get immediate medical attention for any significant overexposure.

- Inhalation : Leave area to breathe fresh air. Avoid further overexposure. If symptoms persist, get medical attention.
- Eye contact : Flush with water for 15 minutes. If irritation persists, get medical attention.
- Skin contact : Wash area of contact thoroughly with hand cleaner followed by soap and water. If irritation, rash or other disorders develop, get medical attention immediately.
- Ingestion : Do not induce vomiting unless advised by a physician. Call nearest Poison Control Center or Physician immediately.

SECTION 5 - FIRE FIGHTING MEASURES

- Flash point : > 200 °F, > 93 °C
- Method : Closed Cup
- Lower explosion limit : Not available.
- Upper explosion limit : Not available.
- Autoignition temperature : Not available.
- Extinguishing media : If water fog is ineffective, use carbon dioxide, dry chemical or foam.
- Hazardous combustion products : Carbon monoxide, carbon dioxide, and nitrogen oxides.
- Protective equipment for firefighters : Use accepted fire fighting techniques. Wear full firefighting protective clothing, including self-contained breathing apparatus (SCBA).
- Fire and explosion conditions : Product may ignite if heated in excess of its flash point.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Stop flow. Contain spill. Keep out of water courses. Absorb spill in sand, earth or other suitable material.

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Transfer to appropriate container for disposal.

SECTION 7 - HANDLING AND STORAGE

Store under normal warehouse conditions. Handle in compliance with common hygienic practices. Clean hands thoroughly after handling. Prevent inhalation of vapor, ingestion, and contact with skin eyes and clothing. Keep container closed when not in use. Precautions also apply to emptied containers.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION**Personal protection equipment**

- Respiratory protection : Use full engineering controls before relying on personal protective equipment. Wear NIOSH/MSHA approved vapor respirator with appropriate cartridge when the vapor concentration is expected to exceed exposure limits indicated on the MSDS. Follow manufacturer's directions for respirator use.
- Hand protection : Protect hands with impervious gloves.
- Eye protection : Wear chemical safety goggles and/or face shield to prevent eye contact. Do not wear contact lenses. Do not touch eyes with contaminated body parts or materials. Have eye washing facilities readily available.
- Protective measures : Use professional judgment in the selection, care, and use.
- Engineering measures : Use local exhaust when the general ventilation is inadequate.

Exposure Limits

No known components with exposure limits.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

- Form : Liquid solution
- Color : Amber
- Odor : Mild
- pH : Not available.
- Vapour pressure : Not available.
- Vapor density : Not available.
- Melting point/range : Not available.
- Freezing point : Not available.
- Boiling point/range : Not available.
- Water solubility : Not available.
- Specific Gravity : 1.11
- % Volatile Weight : 5.0 %

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SECTION 10 - REACTIVITY / STABILITY

Substances to avoid : Acids.

Stability : Stable under normal conditions. Avoid welding arcs, flames or other high temperature sources.

Hazardous polymerization : Will not occur under normal conditions.

SECTION 11 - TOXICOLOGICAL INFORMATION

Diethylene glycol, CAS-No.: 111-46-6
Acute oral toxicity (LD-50 oral) 15,600 mg/kg (Rat) 13,300 mg/kg (Mouse) 26,900 mg/kg
(Rabbit) 14,000 mg/kg (Guinea pig)

Ethylene glycol, CAS-No.: 107-21-1
Acute oral toxicity (LD-50 oral) 6,140 mg/kg (Rat) 14,600 mg/kg (Mouse) 8,200 mg/kg (Guinea pig) 8,810 mg/kg (Dog)

SECTION 12 - ECOLOGICAL INFORMATION

No Data Available

SECTION 13 - DISPOSAL CONSIDERATIONS

Disposal Method : Waste not regulated under RCRA. Incinerate at EPA approved facility or dispose of waste in compliance with state and local regulations.

SECTION 14 - TRANSPORTATION / SHIPPING DATA

TDG / DOT Shipping Description:
NOT REGULATED

SECTION 15 - REGULATORY INFORMATION**North American Inventories:**

All components are listed or exempt from the TSCA inventory.
This product or its components are listed on, or exempt from the Canadian Domestic Substances List.

U.S. Federal Regulations:

SARA 313 Components : Ethylene glycol 107-21-1

SARA 311/312 Hazards : Acute Health Hazard

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OSHA Hazardous Components :

Ethylene glycol 107-21-1

OSHA Status: Considered : Irritant
hazardous based on the
following criteria:

OSHA Flammability : Not Regulated

When appropriately mixed with the other part, product has a VOC less water and exempt solvent of:
< 50 g/l

U.S. State Regulations:

MASS RTK Components : Ethylene glycol 107-21-1

Penn RTK Components : Benzenedicarboxylic acid Dimethyl Ester NJ TSRN# 51721300-6238P
Polyether Polyol NJ TSRN# 51721300-6236P
Polyether Polyol NJ TSRN# 51721300-5518P
Polyether Polyol NJ TSRN# 51721300-6237P
Pentamethyldiethylenetriamine 3030-47-5
Diethylene glycol 111-46-6
Ethylene glycol 107-21-1

NJ RTK Components : Benzenedicarboxylic acid Dimethyl Ester NJ TSRN# 51721300-6238P
Polyether Polyol NJ TSRN# 51721300-6236P
Polyether Polyol NJ TSRN# 51721300-5518P
Polyether Polyol NJ TSRN# 51721300-6237P
Pentamethyldiethylenetriamine 3030-47-5

WARNING! Contains chemicals known to the State of California to cause cancer, birth defects and/or other reproductive harm:
None known.

SECTION 16 - OTHER INFORMATION**HMIS Rating :**

Health	2
Flammability	1
Reactivity	1
PPE	

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Further information:

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CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act
DOT - Department of Transportation
DSL - Domestic Substance List
EPA - Environmental Protection Agency
HMIS - Hazardous Materials Information System
IARC - International Agency for Research on Cancer
MSHA - Mine Safety Health Administration
NDSL - Non-Domestic Substance List
NIOSH - National Institute for Occupational Safety and Health
NTP - National Toxicology Program
OSHA - Occupational Safety and Health Administration

PEL - Permissible Exposure Limit
RCRA - Resource Conservation and Recovery Act
RTK - Right To Know
SARA - Superfund Amendments and Reauthorization Act
STEL - Short Term Exposure Limit
TLV - Threshold Limit Value
TSCA - Toxic Substances Control Act
TWA - Time Weighted Average
V - Volume
VOC - Volatile Organic Compound
WHMIS - Workplace Hazardous Materials Information System