

**DURAL 50 LM 2:1 PART B**

Version 1.1

Print Date 05/28/2008

REVISION DATE: 03/20/2008

SECTION 1 - PRODUCT IDENTIFICATION

Trade name : DURAL 50 LM 2:1 PART B
Product code : TB53333505

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**

Clear to Amber. Liquid. May cause slight irritation to the respiratory system. Move to fresh air. If required, artificial respiration or administration of oxygen can be performed by trained personnel.

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 gastrointestinal irritation, nausea, and vomiting. May cause chemical burns to stomach, mouth, nose, and throat.
Skin : May cause itching, reddening, inflammation. May cause severe burns, blistering and skin damage. May cause sensitization resulting in irritation, itching and redness. May cause a rash.

Aggravated Medical Conditions

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

Chronic Health Effects

May cause sensitization by contact. Prolonged skin contact may cause irritation, burns or dermatitis. Repeated overexposure to vapors and/or material may injure the liver, kidneys and respiratory system unless suitable engineering controls and/or personal protective equipment are used. May aggravate persons sensitized to amines. Diethylenetriamine is a skin and eye irritant. Prolonged and repeated exposure can cause skin sensitization, dermatitis, asthma. Repeated inhalation of nonyl phenol may cause lung damage. Repeated skin contact with nonyl phenol may cause skin irritation and dermatitis. Fillers are encapsulated and not expected to be released from product under normal conditions of use.

SECTION 3 - PRODUCT COMPOSITION

Chemical Name	CAS-No.	Weight %
Poly(oxypropylene) diamine	9046-10-0	30.0 - 60.0

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Benzyl alcohol	100-51-6	15.0 - 40.0
Modified Amine	NJ TSRN# 51721300-5867P	10.0 - 30.0
Diethylenetriamine	111-40-0	7.0 - 13.0
4-Nonylphenol	84852-15-3	7.0 - 13.0
N Amino ethyl piperazine	140-31-8	5.0 - 10.0
Bisphenol A	80-05-7	3.0 - 7.0
1,2-Cyclohexanediamine	694-83-7	3.0 - 7.0

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.
- Eye contact : Flush with water for at least 15 minutes while holding eye lids apart. Get medical attention immediately.
- Skin contact : Clean area of contact thoroughly using 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 : Setaflash 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. 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 : Product may ignite if heated in excess of its flash point. Vapors may travel to sources of ignition and flashback. Vapor concentrations in enclosed areas may ignite explosively. Empty containers may contain ignitable vapors.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Use appropriate protective equipment. Avoid contact with material. Remove sources of ignition immediately. Stop flow of material if safe to do so. Contain spill and keep out of water courses. Ventilate area.

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SECTION 7 - HANDLING AND STORAGE

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. Do not smoke, weld, generate sparks, or use flame near container. Do not use in confined or poorly ventilated areas. Personal protective equipment must be worn during maintenance or repair of contaminated mixer, reactor, or other equipment. Store under dry warehouse conditions away from heat and all ignition sources.

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

- Respiratory protection : 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 : Use suitable impervious nitrile or neoprene gloves and protective apparel to reduce exposure.
- 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. Use rubber apron and overshoes.
- Protective measures : Inspect and replace equipment at regular intervals. Use professional judgment in the selection, care, and use.
- Engineering measures : Use only in well ventilated areas. Provide maximum ventilation in enclosed areas. Use local exhaust when the general ventilation is inadequate.

Exposure Limits

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Regulation</u>	<u>Limit</u>	<u>Form</u>
Diethylenetriamine	111-40-0	ACGIH TWA:	1 ppm	

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

- Form : Liquid
- Color : Clear to Amber
- Odor : Amine
- pH : Not available.
- Vapour pressure : Not available.
- Vapor density : Heavier than air
- Melting point/range : Not available.
- Freezing point : Not available.
- Boiling point/range : Not available.
- Water solubility : Negligible

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Specific Gravity : 1.01
% Volatile Weight : 33.4 %

SECTION 10 - REACTIVITY / STABILITY

Substances to avoid : Oxidizing agents.Epoxies.Isocyanates.Acids.
Stability : Material is stable under normal storage, handling, and use.
Hazardous polymerization : Will not occur under normal conditions.

SECTION 11 - TOXICOLOGICAL INFORMATION

Benzyl alcohol, CAS-No.: 100-51-6
Acute oral toxicity (LD-50 oral) 1,580 mg/kg (Mouse) 1,940 mg/kg (Rabbit) 3,100 mg/kg (Rat) 1,230 - 3,100 mg/kg (Rat)
Acute inhalation toxicity (LC-50) 200 - 300 mg/l for 8 h (Rat) 1,000 mg/l for 8 h (Rat)

Diethylenetriamine, CAS-No.: 111-40-0
Acute oral toxicity (LD-50 oral) 1,080 mg/kg (Rat) 2,330 mg/kg (Rat)

Bisphenol A, CAS-No.: 80-05-7
Acute oral toxicity (LD-50 oral) 3,300 mg/kg (Rat) 4,100 mg/kg (Rat) 3,300 mg/kg (Rat) 5,280 mg/kg (Mouse) 4,100 mg/kg (Mouse) 2,500 mg/kg (Mouse) 4,100 mg/kg (Mouse) 5,280 mg/kg (Mouse) 4,100 mg/kg (Rat) 2,500 mg/kg (Mouse)

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:**

CORROSIVE LIQUID, N.O.S. (Modified polyamine), 8, UN1760, PG III

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

All components are listed or exempt from the TSCA inventory.

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One or more components are listed on the NDSL.

U.S. Federal Regulations:

SARA 313 Components : Bisphenol A 80-05-7

SARA 311/312 Hazards : Acute Health Hazard

OSHA Hazardous Components :

Diethylenetriamine 111-40-0

Bisphenol A 80-05-7

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

OSHA Flammability : Not Regulated

Regulatory VOC (less water and
exempt solvent) : 338 g/l

VOC Method 310 : 33 %

U.S. State Regulations:MASS RTK Components : Benzyl alcohol 100-51-6
Diethylenetriamine 111-40-0
N Amino ethyl piperazine 140-31-8
Bisphenol A 80-05-7Penn RTK Components : Poly(oxypropylene) diamine 9046-10-0
Benzyl alcohol 100-51-6
Modified Amine NJ TSRN# 51721300-5867P
Diethylenetriamine 111-40-0
4-Nonylphenol 84852-15-3
N Amino ethyl piperazine 140-31-8
Bisphenol A 80-05-7
1,2-Cyclohexanediamine 694-83-7NJ RTK Components : Poly(oxypropylene) diamine 9046-10-0
Benzyl alcohol 100-51-6
Modified Amine NJ TSRN# 51721300-5867P
Diethylenetriamine 111-40-0
4-Nonylphenol 84852-15-3WARNING! Contains chemicals known to the State of California to cause cancer, birth defects and/or other reproductive harm:
None known.

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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
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