spectrum®



SAFETY DATA SHEET

Preparation Date: 06/16/2015	Revision date 5/3/2019	Revision Number: G2
	1. IDENTIFICATION	
Product identifier		
Product code:		
Product Name:	N,N-DIMETHYLETHANOLAMINE	
Other means of identification		
Synonyms:	2-(Dimethylamino)ethanol; 2-Dimethylamino beta-Dimethulaminoethyl alcohol; beta-Hydro Deanol; Dimethylaminoethanol; DMAE; Lipa N,N-Dimethyl-2-hydroxyethylamine; N,N-Dim N,N-Dimethylaminoethanol; N-Dimethylamic A.; INCI name is Dimethyl MEA	oxyethyldimethylamine; Bimanol; ron; nethyl-n-(2-hydroxyethyl)amine;
CAS #:	108-01-0	
RTECS # CI#:	KK6125000 Not available	
Recommended use of the che	mical and restrictions on use	
Recommended use:	No information available.	
Uses advised against	No information available	
<u>Supplier:</u>	Spectrum Chemical Mfg. Corp 14422 South San Pedro St. Gardena, CA 90248 (310) 516-8000	
Order Online At:	https://www.spectrumchemical.com	
Emergency telephone number	Chemtrec 1-800-424-9300	
Contact Person:	Tom Tyner (USA - West Coast)	
Contact Person:	Ibad Tirmiz (USA - East Coast)	
	2. HAZARDS IDENTIFICATION	

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Acute toxicity - Oral	Category 4
Acute toxicity - Dermal	Category 4
Acute toxicity - Inhalation (Gases)	Category 3
Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1
Flammable liquids	Category 3

Label elements

Danger

Hazard statements Harmful if swallowed Harmful in contact with skin Toxic if inhaled Causes severe skin burns and eye damage Flammable liquid and vapor

Hazards not otherwise classified (HNOC) Not Applicable

Other hazards

May be harmful if inhaled Harmful to aquatic life with long lasting effects Harmful to aquatic life

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling Do not eat, drink or smoke when using this product Wear protective gloves/protective clothing/eye protection/face protection Use only outdoors or in a well-ventilated area Do not breathe mist or vapors Keep away from heat/sparks/open flames/hot surfaces. — No smoking Keep container tightly closed Ground container and receiving equipment Use explosion-proof equipment Use only non-sparking tools Take precautionary measures against static discharge

Precautionary Statements - Response

Immediately call a POISON CENTER or physician In case of fire: Use CO2, dry chemical, or foam to extinguish. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician. Call a POISON CENTER or physician if you feel unwell Wash contaminated clothing before reuse IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician. IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell Rinse mouth Do NOT induce vomiting

Precautionary Statements - Storage

Store locked up Store in a well-ventilated place. Keep cool

Precautionary Statements - Disposal Dispose of contents and container to an approved waste disposal plant in accordance with local, regional, national and international regulations as applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

NN-Dimethylethanolamine 108-01-0 100 A. FIRST AID MEASURES First aid measures General Advice: National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222. Skin Contact: Wash off immediately with scap and plenty of water. Continue flushing with plenty of water for at least 15 minutes. Remove all contaminated clothes and shoes. Immediate medical attention is required. Call a physician or Poison Control Centre immediately. Eye Contact: Flush eyes with water for 15 minutes. Immediate medical attention is required. Call a physician immediately. Inhalation: Move to fresh air. If not breathing, give artificial respiration. If breating is difficult, give oxygen. WARNING1 It may be hazardous to the perform providing aid to give moutific or burb norseination threads the investigation of ingestering providing and to give moutific or an unconscious person. Immediate medical attention is required. Ingestion: Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Immediate medical attention is required. Symptoms Causes severe skin burns Causes severe skin burns Causes severe skin burns	Component		CAS No	Weight-%
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Suitable Extinguishing Media:Carbon dioxide (CO2). Dry chemical. Alcohol-resistant foam. Water spray.Unsuitable Extinguishing Media:Do not use a solid (straight) water stream as it may scatterProduct code:D2399Product name:Page 3 / 13	Extinguishing Madia			
foam. Water spray.Unsuitable Extinguishing Media:Do not use a solid (straight) water stream as it may scatterProduct code: D2399Product name:Page 3 / 13			Carbon dioxido (CO	2) Dry chemical Alcohol-resistant
Unsuitable Extinguishing Media: Do not use a solid (straight) water stream as it may scatter Product code: D2399 Product name: Page 3 / 13	Suitable Extinguishing Media:			
Product code: D2399 Product name: Page 3/13				
Product code: D2399 Product name: Page 3/13			_	
	Unsuitable Extinguishing Media:		Do not use a solid (straight) water stream as it may scatter
	Product code: D2399		Product name:	Page 3 / 13
		N,N	-DIMETHYLETHANOLAMINE	-

and spread fire.

Specific hazards arising from the chemical

Hazardous combustion products	Carbon Monoxide, Carbon Dioxide. Nitrogen oxides (NOx).
Specific hazards	Flammable. May be ignited by heat, sparks or flames. Container explosion may occur under fire conditions or when heated. Vapor may travel considerable distance to source of ignition and flash back. Vapors may form explosive mixtures with air. Most vapors are heavier than air. They will spread along the ground and collect in low or confined areas (sewers, basements, tanks).
Special Protective Actions for Firefighters	
Specific Methods:	No information available
Special Protective Equipment for Firefighters:	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear
6. ACCIDENTAL	_ RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions:	Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid contact with skin, eyes and clothing. Use personal protective equipment. Remove all sources of ignition. Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use spark-proof tools and explosion-proof equipment. In case of large spill, water spray or vapor suppressing foam may be used to reduce vapors, but may not prevent ignition in closed spaces.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Prevent entry into waterways, sewers, basements or confined areas.
Methods and material for contai	nment and cleaning up
Methods for containment	Stop leak if you can do it without risk. Absorb spill with inert material (e.g. vermiculite, dry sand or earth). In case of large spill, dike if needed. Dike far ahead of liquid spill for later disposal.
Methods for cleaning up	Use appropriate tools to put the spilled material in a suitable chemical waste disposal container. Use only non-sparking tools. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:

Provide sufficient air exchange and/or exhaust in work rooms. Remove all sources of ignition. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Keep away from incompatible materials.

Safe Handling Advice

Wear personal protective equipment. Use only in well-ventilated areas. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Do not breathe vapors or spray mist. Do not ingest. When using do

not smoke. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials. Keep away from heat and sources of ignition.

Incompatible Materials:

Oxidizing agents

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

Component	CAS No	OSHA	NIOSH	ACGIH	AIHA WEEL
N,N-Dimethylethanolami	108-01-0	None	None	None	None
ne					

Canada

Component	CAS No	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec
N,N-Dimethylethanolami ne	108-01-0	None	None	6 ppm STEL 22 mg/m ³ STEL	None

Australia and Mexico

Component	CAS No	Australia	Mexico
N,N-Dimethylethanolamine	108-01-0	6 ppm STEL 22 mg/m³ STEL 2 ppm TWA 7.4 mg/m³ TWA	None

Appropriate engineering controls

Engineering measures to reduce exposure:

Ensure adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and mist below their respective threshold limit value.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

Product code: D2399	Product name:	Page 5 / 13
Respiratory protection:	Vapor respirator. Be sure to use an approved/certified	respirator or equivalent.
Skin and body protection:	Chemical resistant apron Gloves Long sleeved clothing If working with large quantities: Chemical resistant protective suit	
Eye protection:	Goggles or Face-shield.	

N,N-DIMETHYLETHANOLAMINE

Hygiene measures:

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product When using, do not eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid

Odor: Amine-like.

89.14

Flash Point Tested according to: Not available

Upper Explosion Limit (%): 11.9

Boiling point/range(°C/°F): 133°-139°C/271.4°-282.2°F

Specific gravity: 0.8866

Evaporation rate: No information available

Odor threshold (ppm): No information available

Miscibility: Miscible with alcohol Miscible with Benzene Appearance: No information available.

Taste No information available.

Molecular/Formula weight (g/mole): Flammability (solid, gas) Flammable

> Autoignition Temperature (°C/°F): 295°C/563°F

Melting point/range(°C/°F): -70°-(-59°C)/-94°-(-74.2°F)

Bulk density: No information available

pН No information available

Vapor density: 3.03

Partition coefficient (n-octanol/water): No information available

Solubility: Soluble in Acetone Soluble in cold water Soluble in diethyl ether

Color: Colorless to pale yellow.

Formula C4H11NO

Flashpoint (°C/°F): Closed Cup: 40°C/104°F; Open Cup: 40.556°C/105°F Lower Explosion Limit (%): 1.6

Decomposition temperature(°C/°F): No information available

Density (g/cm3): No information available

Vapor pressure @ 20°C (kPa): No information available

VOC content (g/L): No information available

Viscosity: No information available

10. STABILITY AND REACTIVITY

Reactivity Reactive with oxidizing agents

Chemical stability	
Stability:	Stable under recommended storage conditions.
Possibility of Hazardous Reactions:	_Hazardous polymerization does not occur
Conditions to avoid:	Heat. Ignition sources. Incompatible materials.
Incompatible Materials:	Oxidizing agents
Hazardous decomposition products:	Carbon oxides. Nitrogen oxides (NOx).

Other Information

Product code: D2399

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure: Eyes. Inhalation. Skin.

Acute Toxicity

Component Information

N,N-Dimethylethanolamine	
CAS No	108-01-0
	Oral LD50 Rat (LOLI); 2000 mg/kg (RTECS); 2000-2340 mg/kg (European
Chemicals Bureau IUCLID dat	
LD50/oral/mouse = 3100 mg	
LD50/dermal/rabbit = 1370	JL/kg Dermal LD50 Rabbit (RTECS)
1220 mg/kg (LOLI)	
1220-3135 (European Commi	ssion IUCLID dataset)
LD50/dermal/rat = No inform	
LC50/inhalation/rat = 1641 p	opm Inhalation LC50 Rat 4 h
	250 mg/m ³ Inhalation LC50 Mouse 4 h
	tion = No information available
Product Information	
LD50/oral/rat =	
Value - Acute Tox = 2000 mg/k	g
LD50/oral/mouse =	
Value - Acute Tox Oral = 3100	mg/kg
LD50/dermal/rabbit	
Value - Acute Tox = 1220 mg/k	g
LD50/dermal/rat	te ferre en la seconda de la
VALUE - Acute Tox Dermal = N	o information available
LC50/inhalation/rat	
VALUE-Vapor = No information	available
VALUE-Gas = 1641 ppm (4-hr)	
VALUE-Dust/Mist = No informat	ion available
LC50/Inhalation/mouse	
VALUE-Vapor = 3250 mg/m ³ 4H	
VALUE - Gas = No information a	
VALUE - Dust/Mist = No information	ation available
Commutant a	
<u>Symptoms</u>	
Skin Contact	Courses source irritation and huma. May be abaarhed through the abir. Harry fulling
Skin Contact:	Causes severe irritation and burns. May be absorbed through the skin. Harmful in
	contact with skin.

Product code: D2399

Eye Contact:	Contact with liquid or vapor causes severe burns and possible irreversible eye damage including corneal injury and cataracts. Causes severe irritation and burns.
Inhalation	Toxic by inhalation. It can irritate the respiratory tract (lungs) and cause sore throat, sneezing, coughing, wheezing, and/or shortness of breath/dyspnea. Higher exposures can cause a build-up of fluid in the lungs (pulmonary edema) with severe shortness of breath. It can affect behavior/central nervous system and cause headache, muscle tenderness, restlessness, ataxia, tremor, increased irritability, lack of sleep, insomnia, convulsions, coma. It may also affect metabolsim and cause anorexia.
Ingestion	Harmful if swallowed.
Aspiration hazard	No information available.
Delayed and immediate effects	as well as chronic effects from short and long-term exposure
Chronic Toxicity	Prolonged or repeated inhalation may cause asthma-like allergy and asthma attacks with shortness of breath, difficulty breathing, wheezing, coughing, and/or chest tightness.
Sensitization:	No information available.
Mutagenic Effects:	No information available

Carcinogenic effects:

Not considered carcinogenic.

Component	CAS No	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
N,N-Dimethylethanolamine	108-01-0	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

ACGIH (American Conference of Governmental Industrial Hygienists)

IARC (International Agency for Research on Cancer)

NTP (National Toxicology Program)

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

Reproductive toxicity	No data is available
Reproductive Effects:	No information available
Developmental Effects:	No information available
Teratogenic Effects:	No information available

Specific Target Organ Toxicity

STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Target Organs:	No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects:	Aquatic environment.
<i>N,N-Dimethylethanolamine - 108-0</i> Algae/aquatic plants Fish Crustacea	01-0 EC50: =35mg/L (72h, Desmodesmus subspicatus) LC50: =81mg/L (96h, Pimephales promelas) EC50: =98.77mg/L (48h, Daphnia magna)
Persistence and degradability:	No information available
Bioaccumulative potential:	No information available.
Mobility in soil Other adverse effects	No information available No information available.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:

Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:

Empty containers should be taken for local recycling, recovery or waste disposal

Component	CAS No	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
N,N-Dimethylethanolamine	108-01-0	None	None	None	None

14. TRANSPORT INFORMATION

DOT

UN-No:	UN2051
Proper Shipping Name:	2-Dimethylaminoethanol
Hazard Class	8
Subsidiary Class	3
Packing group:	II
Emergency Response Guide	132
Number	
Marine Pollutant	No data available
DOT RQ (lbs):	No information available
Special Provisions	B2, IB2, T7, TP2
Symbol(s):	No information available
Description:	UN2051, 2-Dimethylaminoethanol, 8 (3), II
TDC (Canada)	
TDG (Canada) UN-No:	UN2051
Proper Shipping Name: Hazard Class	2-Dimethylaminoethanol 8
	-
Subsidiary Risk:	(3)
Packing Group: Marine Pollutant	No Information available
Description:	UN2051, 2-Dimethylaminoethanol, 8 (3), II
ADR	
UN Number	UN2051
Proper Shipping Name:	2-Dimethylamino-ethanol
Product code: D2309	Product name:

Transport hazard class(es) Packing group Subsidiary Risk: Description:	8 II 3 UN2051, 2-Dimethylamino-ethanol, 8 (3), II
IMDG UN-No: Proper Shipping Name: Hazard Class: Subsidiary Risk: Packing Group: Marine Pollutant EMS: Description	UN2051 2-Dimethylaminoethanol 8 3 II No information available F-E UN2051, 2-Dimethylaminoethanol, 8 (3), II
RID UN Number Proper Shipping Name: Transport hazard class(es) Subsidiary Risk: Packing group Description:	UN2051 2-Dimethylaminoethanol 8 3 II UN2051, 2-Dimethylaminoethanol, 8 (3), II
ICAO (air) UN-No: Proper Shipping Name: Hazard Class Subsidiary Risk: Packing Group: Description:	UN2051 2-Dimethylaminoethanol 8 3 II UN2051, 2-Dimethylaminoethanol, 8 (3), II
IATA UN Number Proper Shipping Name: Transport hazard class(es) Subsidiary Risk: Packing group Precautionary Statements - Response Special Provisions Description:	UN2051 2-Dimethylaminoethanol 8 3 II 8F No information available UN2051, 2-Dimethylaminoethanol, 8 (3), II

15. REGULATORY INFORMATION

International Inventories

Component	CAS No	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	China IECSC	Australia (AICS)	EINECS-No.
N,N-Dimethylethanola mine	108-01-0	PresentACTIV E	Present KE-11494	Present	Present (2)-353,(2)-29 7	Present	Present	Present 203-542-8

U.S. Regulations

N,N-Dimethylethanolamine

Massachusetts RTK: Present New Jersey RTK Hazardous Substance List: 3111 Pennsylvania RTK: Present

FDA - 21 CFR - Total Food Additives 173.20, 175.105, 175.300 - List Sourced from EAFUS

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Component	CAS No	Carcinogen	Developmental Toxicity	Male	Female
		_		Reproductive	Reproductive
				Toxicity	Toxicity:
N,N-Dimethylethanolamine	108-01-0	Not Listed	Not Listed	Not Listed	Not Listed

CERCLA/SARA

Component	CAS No	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting de minimis
N,N-Dimethylethan olamine	108-01-0	None	None	None	None	None

U.S. TSCA

Component		TSCA Section 5(a)2 - Chemicals	TSCA 8(d) -Health and Safety
		With Significant New Use Rules (SNURS)	Reporting
N,N-Dimethylethanolamine	108-01-0	Not Applicable	Not Applicable

Canada

WHIMIS 2015 - GHS Classifications

WHMIS 2015 Hazard Classification Information:

Component N,N-Dimethylethanolamine 108-01-0 (100) WHMIS 2015 Hazard Classification Flammable liquids - Category 3: H226 Flammable liquid and vapour.; Acute toxicity - Oral - Category 4: H302 Harmful if swallowed.; Acute toxicity - Dermal - Category 4: H312 Harmful in contact with skin.; Acute toxicity - Inhalation - Category 3: H331 Toxic if inhaled.; Health Hazard Not Otherwise Classified -Category 1: Causes severe damage to the respiratory tract; Skin corrosion/irritation - Category 1: H314 Causes severe skin burns and eye damage.; Serious Eye Damage/Eye Irritation - Category 1: H318 Causes serious eye damage.

Canada Hazardous Products Regulation This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

DSL/NDSL

Component	CAS No	Canada (DSL)	Canada (NDSL)
N,N-Dimethylethanolamine	108-01-0	Present	Not Listed
Component		CAS No	CEPA Schedule I - Toxic Substances
		·	

N,N-Dimethylethanolamine	108-01-0	Not listed	
Component	CAS No	CEPA - 2010 Greenhouse Gases Subject	
		to Mandatory Reporting	
N,N-Dimethylethanolamine	108-01-0	Not listed	

EU Classification

EU GHS - SV - CLP 1272/2008

Component	CAS No	EU GHS - SV - CLP (1272/2008)
N,N-Dimethylethanolamine	108-01-0	Flammable liquids - Flam. Liq. 3: H226
		Flammable liquid and vapour.; Acute
		toxicity - Oral - Acute Tox. 4: H302
		Harmful if swallowed. (Minimum
		classification); Acute toxicity - Dermal -
		Acute Tox. 4: H312 Harmful in contact
		with skin. (Minimum classification);
		Acute toxicity - Inhalation - Acute Tox.
		4: H332 Harmful if inhaled. (Minimum
		classification); Skin corrosion/irritation
		- Skin Corr. 1B: H314 Causes severe
		skin burns and eye
		damage.603-047-00-0
		Specific target organ toxicity - Single
		exposure - STOT SE 3: H335 May
		cause respiratory irritation. ($C \ge 5$
		%)603-047-00-0

EU - CLP (1272/2008)

R-phrase(s)

R10 - Flammable

R34 - Causes burns

R20/21/22 - Harmful by inhalation, in contact with skin and if swallowed

S -phrase(s)

S25 - Avoid contact with eyes

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice

S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible) S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection

Component	CAS No	Classification	Concentration Limits:	Safety Phrases
N,N-Dimethylethanolamin e		Xn; R20/21/22		S1/2 S25 S26 S36/37/39 S45

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:

Flammable C - Corrosive Xn - Harmful





Product code: D2399

16. OTHER INFORMATION

Preparation Date:	06/16/2015
Revision date	5/3/2019
Prepared by:	Sonia Owen
Disclaimer:	All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet