

SAFETY DATA SHEET

spectrum®



Revision date 20-November-2020

Revision Number 2

1. Identification

Product identifier

Product Name DIETHYLENETRIAMINE

Other means of identification

Product Code(s) D1092

UN/ID no UN2079

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended use No information available

Restrictions on use No information available

Details of the supplier of the safety data sheet

Supplier Address

Spectrum Chemical Mfg. Corp.
14422 South San Pedro St.
Gardena, CA 90248
(310) 516-8000

Emergency telephone number

Emergency Telephone Chemtrec 1-800-424-9300

2. Hazard(s) identification

Classification

Acute toxicity - Oral	Category 4
Acute toxicity - Dermal	Category 4
Skin corrosion/irritation	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 1
Respiratory sensitization	Category 1A
Skin sensitization	Category 1
Specific target organ toxicity (single exposure)	Category 3

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Danger

Hazard statements

Harmful if swallowed
Harmful in contact with skin
Causes severe skin burns and eye damage
May cause allergy or asthma symptoms or breathing difficulties if inhaled
May cause an allergic skin reaction
May cause respiratory irritation



Appearance Clear viscous

Physical state Liquid

Odor Ammoniacal

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Do not breathe dusts or mists
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

Precautionary Statements - Response

Immediately call a POISON CENTER or doctor
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 doctor
Call a POISON CENTER or doctor if you feel unwell
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower
If skin irritation or rash occurs: Get medical advice/attention
Wash contaminated clothing before reuse
IF INHALED: Remove person to fresh air and keep comfortable for breathing
Immediately call a POISON CENTER or doctor
IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell
Rinse mouth
Do NOT induce vomiting

Precautionary Statements - Storage

Store locked up.

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Unknown acute toxicity

Other information

No information available.

3. Composition/information on ingredients

Substance

Chemical name	CAS No	Weight-%	Trade secret
Diethylenetriamine	111-40-0	100	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. First-aid measures

Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
Inhalation	Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get immediate medical advice/attention. May cause allergic respiratory reaction. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical advice/attention. May cause an allergic skin reaction.
Ingestion	Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention. May produce an allergic reaction.
Self-protection of the first aider	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personal protective equipment as required. See section 8 for more information.

Most important symptoms and effects, both acute and delayed

Symptoms	Burning sensation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Coughing and/ or wheezing. Itching. Rashes. Hives.
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Indication of any immediate medical attention and special treatment needed

Note to physicians	Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization in susceptible persons. Treat symptomatically.
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5. Fire-fighting measures

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.
Specific hazards arising from the chemical	The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors. Product is or contains a sensitizer. May cause sensitization by inhalation and skin contact. May cause sensitization by skin contact.
Explosion data	
Sensitivity to mechanical impact	none.
Sensitivity to static discharge	none.
Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Attention! Corrosive material. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
Other information	Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Pick up and transfer to properly labeled containers.

7. Handling and storage

Precautions for safe handling

Advice on safe handling	Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Provide extract ventilation to points where emissions occur. Remove contaminated clothing and shoes.
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Conditions for safe storage, including any incompatibilities

Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Store locked up. Protect from moisture. Store away from other materials.
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8. Exposure controls/personal protection

Control parameters

Exposure Limits	The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.
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Appropriate engineering controls

Engineering controls	Showers Eyewash stations Ventilation systems.
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Individual protection measures, such as personal protective equipment

Eye/face protection	Tight sealing safety goggles. Face protection shield.
Hand protection	Wear suitable gloves. Impervious gloves.
Skin and body protection	Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron.
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations

Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Clear viscous
Color	Yellow
Odor	Ammoniacal
Odor threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	no data available	None known
Melting point / freezing point	-39 °C / -38.2 °F	None known
Boiling point / boiling range	207.1 °C / 404.8 °F	None known
Flash point	97 - 98 °C / 206.6 - 208.4 °F	None known
Evaporation rate	no data available	None known
Flammability (solid, gas)	no data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	6.7-10%	
Lower flammability or explosive limits	1-2%	
Vapor pressure	No data available	None known
Vapor density	3.56	None known
Relative density	0.96	None known
Water solubility	Soluble in water	None known
Solubility(ies)	Soluble in Alcohol Insoluble in Ether Soluble in Petroleum Ether	None known
Partition coefficient	No data available	None known
Autoignition temperature	395 - 399 °C / 743 - 750.2 °F	None known
Decomposition temperature		None known
Kinematic viscosity	no data available	None known
Dynamic viscosity	No data available	None known

Other information

Explosive properties	No information available
Oxidizing properties	No information available
Softening point	No information available
Molecular weight	103.17 g/mol
VOC Content (%)	No information available
Liquid Density	No information available
Bulk density	No information available

10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	Exposure to air or moisture over prolonged periods.
Incompatible materials	Acids. Bases. Oxidizing agent.
Hazardous decomposition products	None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation

Specific test data for the substance or mixture is not available. Corrosive by inhalation. (based on components). Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause sensitization in susceptible persons.

Eye contact

Specific test data for the substance or mixture is not available. Causes serious eye damage. (based on components). Corrosive to the eyes and may cause severe damage including blindness. May cause irreversible damage to eyes.

Skin contact

Specific test data for the substance or mixture is not available. Corrosive. (based on components). Causes burns. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. May cause sensitization by skin contact. May be absorbed through the skin in harmful amounts. Harmful in contact with skin.

Ingestion

Specific test data for the substance or mixture is not available. Causes burns. (based on components). Ingestion causes burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. May cause additional effects as listed under "Inhalation".

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms

Redness. Burning. May cause blindness. Coughing and/ or wheezing. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Itching. Rashes. Hives.

Acute toxicity

Numerical measures of toxicity

Unknown acute toxicity

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Diethylenetriamine 111-40-0	= 1080 mg/kg (Rat)	= 672 mg/kg (Rabbit)	= 70 mg/L (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation

Classification based on data available for ingredients. Causes burns.

Serious eye damage/eye irritation

Classification based on data available for ingredients. Risk of serious damage to eyes. Causes burns.

Respiratory or skin sensitization

May cause sensitization by inhalation. May cause sensitization by skin contact.

Germ cell mutagenicity

No information available.

Reproductive toxicity

No information available.

STOT - single exposure

No information available.

STOT - repeated exposure

No information available.

Target organ effects

respiratory system, Eyes, Skin.

Aspiration hazard No information available.

Other adverse effects No information available.

Interactive effects No information available.

12. Ecological information

Ecotoxicity

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Diethylenetriamine 111-40-0	EC50: =1164mg/L (72h, Pseudokirchneriella subcapitata) EC50: =345.6mg/L (96h, Pseudokirchneriella subcapitata) EC50: =592mg/L (96h, Desmodesmus subspicatus)	LC50: =1014mg/L (96h, Poecilia reticulata) LC50: =248mg/L (96h, Poecilia reticulata) LC50: =430mg/L (96h, Leuciscus idus)	-	EC50: =16mg/L (48h, Daphnia magna) EC50: =37mg/L (24h, Daphnia magna)

Persistence and degradability No information available.

Bioaccumulation Inherently biodegradable.

Component Information

Chemical name	Partition coefficient
Diethylenetriamine 111-40-0	-1.3

Other adverse effects No information available.

13. Disposal considerations

Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

14. Transport information

DOT

UN/ID no UN2079

Proper Shipping Name: Diethylenetriamine

Hazard class 8

Packing group: II

Special Provisions B2, IB2, T7, TP2

Marine Pollutant Severe Marine Pollutant

Description: UN2079, Diethylenetriamine, 8, II

Emergency Response Guide Number 154

TDG

UN-No: UN2079

Proper Shipping Name: Diethylenetriamine

Hazard class 8

Packing Group: II

Description: UN2079, Diethylenetriamine, 8, II

MEX

UN-No	UN2079
Proper Shipping Name	Diethylenetriamine
Hazard class	8
Packing Group	II
Description	UN2079, Diethylenetriamine, 8, II

ICAO (air)

UN-No:	UN2079
Proper Shipping Name:	Diethylenetriamine
Hazard class	8
Packing Group:	II
Description:	UN2079, Diethylenetriamine, 8, II

IATA

UN number	UN2079
Proper Shipping Name:	Diethylenetriamine
Transport hazard class(es)	8
Packing group	II
Description:	UN2079, Diethylenetriamine, 8, II

IMDG

UN number	UN2079
Proper shipping name	Diethylenetriamine
Transport hazard class(es)	8
Packing group	II
EmS-No	F-A, S-B
Marine pollutant	NP1
Description	UN2079, Diethylenetriamine, 8, II

RID

UN number	UN2079
Proper Shipping Name:	Diethylenetriamine
Transport hazard class(es)	8
Packing group	II
Classification code	C7
Description:	UN2079, Diethylenetriamine, 8, II
Labels	8

ADR

UN number	2079
Proper Shipping Name:	Diethylenetriamine
Transport hazard class(es)	8
Packing group	II
Classification code	C7
Tunnel restriction code	(E)
Description:	2079, Diethylenetriamine, 8, II, (E)
Labels	8

ADN

UN/ID No	UN2079
Proper shipping name	Diethylenetriamine
Transport hazard class(es)	8
Packing Group	II
Classification code	C7
Description	UN2079, Diethylenetriamine, 8, II
Hazard label(s)	8
Limited quantity (LQ)	1 L
Equipment Requirements	PP, EP

15. Regulatory information**International Inventories**

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	This product complies with ENCS:
IECSC	This product complies with China:
KECL	Complies
PICCS	Complies
AICS	All the constituents of this material are listed on the Australian Inventory of Chemical Substances (AICS).

Legend:

- TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
- DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List
- EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
- ENCS** - Japan Existing and New Chemical Substances
- IECSC** - China Inventory of Existing Chemical Substances
- KECL** - Korean Existing and Evaluated Chemical Substances
- PICCS** - Philippines Inventory of Chemicals and Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

This product does not contain any substances regulated under applicable state right-to-know regulations

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

NFPA

Health hazards 3
Flammability 1
Instability 0
Physical and chemical properties -

HMIS

Health hazards * 2
Flammability 1
Physical hazards 0

Personal protection X
Chronic Hazard Star Legend

* = Chronic Health Hazard

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value		

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGl(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan GHS Classification
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Revision date 20-November-2020
Revision Note No information available.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet