

Version 1.4 PRD Revision Date: 02/27/2020

SDS Number: 150000103681 SDSUS / Z8 / 0330

Date of last issue: 08/06/2019 Date of first issue: 09/06/2016 N60 / 0090829687 / 0000021362

#### **SECTION 1. IDENTIFICATION**

Product name

: Diethylaminoethanol

Distributor details:

Company name : Silver Fern Chemical, Inc.

Address : 2226 Queen Anne Avenue North

Seattle WA 98109, USA

Telephone : 1-866-282-3384

Emergency telephone : 24 Hour Emergency Contact

Infotrac 1-800-535-5053 (USA & Canada) Outside USA & Canada 1-352-323-3500

#### Recommended use of the chemical and restrictions on use

Recommended use

: Intermediate

Restrictions on use : None known.

### **SECTION 2. HAZARDS IDENTIFICATION**

GHS classification in accordance with 29 CFR

Flammable liquids : Category 3

1910.1200

Acute toxicity (Oral) : Category 4

Acute toxicity (Inhalation) : Category 3

Acute toxicity (Dermal) : Category 3

Skin corrosion : Category 1B

Serious eye damage : Category 1

**GHS** label elements

Hazard pictograms :







Signal Word : Danger



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**Hazard Statements** 

: H226 Flammable liquid and vapor.

H302 Harmful if swallowed.

H311 + H331 Toxic in contact with skin or if inhaled. H314 Causes severe skin burns and eye damage.

**Precautionary Statements** 

# Prevention:

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P233 Keep container tightly closed.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.

P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

#### Response:

P301 + P312 + P330 IF SWALLOWED: Call a POISON

CENTER/doctor if you feel unwell. Rinse mouth. P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT

induce vomiting.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.

P305 + P351 + P338 + P310 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/doctor.

P362 Take off contaminated clothing and wash before reuse. P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

#### Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

P403 + P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

#### Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

#### Other hazards

None known.



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## **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture

Pure substance

Components

Chemical name	CAS-No.	Concentration (% w/w)
2-diethylaminoethanol	100-37-8	> 99

#### **SECTION 4. FIRST AID MEASURES**

General advice

Show this material safety data sheet to the doctor in

attendance.

Call a physician immediately.

If inhaled : Move to fresh air.

If symptoms persist, call a physician.

In case of skin contact : Wash off immediately with plenty of water for at least 15

minutes.

Wash contaminated clothing before re-use.

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids,

for at least 15 minutes.

Remove contact lenses, if present and easy to do. Continue

rinsing.

If swallowed : Clean mouth with water and drink afterwards plenty of water.

Do not induce vomiting without medical advice.

Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and

delayed

Harmful if swallowed.

Toxic in contact with skin or if inhaled.

Causes serious eye damage.

Causes severe burns.

Notes to physician : Treat symptomatically.

#### **SECTION 5. FIRE-FIGHTING MEASURES**

Suitable extinguishing media : Use water spray to extinguish.

Carbon dioxide (CO2) Alcohol-resistant foam

Dry chemical

Unsuitable extinguishing

media

Do NOT use water jet.

Specific hazards during fire

fighting

Thermal decomposition can lead to release of irritating gases

and vapors.

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Hazardous combustion prod: :

Carbon oxides

Nitrogen oxides (NOx)

Further information Prevent fire extinguishing water from contaminating surface

water or the ground water system.

Do not allow run-off from fire fighting to enter drains or water

courses.

for fire-fighters

Special protective equipment : Wear self-contained breathing apparatus and protective suit.

#### **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment.

Local authorities should be advised if significant spillages

cannot be contained.

**Environmental precautions** Avoid release to the environment.

Do not flush into surface water or sanitary sewer system.

Prevent product from entering drains.

Prevent further leakage or spillage if safe to do so.

Methods and materials for containment and cleaning up Eliminate all ignition sources if safe to do so.

Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local /

national regulations (see section 13).

Large spills should be collected mechanically (remove by

pumping) for disposal.

Keep in suitable, closed containers for disposal.

#### **SECTION 7. HANDLING AND STORAGE**

Advice on protection against :

fire and explosion

Take precautionary measures against static discharges.

Do not breathe vapors or spray mist. Advice on safe handling

Avoid contact with skin, eyes and clothing.

Use only with adequate ventilation. Wash thoroughly after handling.

Conditions for safe storage

Keep containers tightly closed in a cool, well-ventilated place.

Protect against light.



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#### **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

# Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
2-diethylaminoethanol	100-37-8	TWA	2 ppm	ACGIH
		TWA	10 ppm	NIOSH REL
			50 mg/m3	
		TWA	10 ppm	OSHA Z-1
			50 mg/m3	
		TWA	10 ppm	OSHA P0
			50 mg/m3	

**Engineering measures** 

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.

### Personal protective equipment

Respiratory protection

Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

Hand protection

Remarks

Rubber gloves Neoprene gloves The exact break through time can be obtained from the protective glove producer and

this has to be observed.

Eye protection

Safety glasses with side-shields

Face-shield

Skin and body protection

Wear suitable protective clothing.

Protective measures

Ensure that eye flushing systems and safety showers are

located close to the working place.

Hygiene measures

Handle in accordance with good industrial hygiene and safety

practice.

#### **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance** 

: liquid



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Color colorless

Odor amine-like

Odor Threshold not determined

11.5 (68 °F / 20 °C) pΗ

Concentration: 10 %

Melting point/freezing point -90 °F / -68 °C

324.25 °F / 162.36 °C Boiling point/boiling range

Flash point 125.1 °F / 51.7 °C

Evaporation rate not determined

Upper explosion limit / Upper

flammability limit

10.10 %(V)

Lower explosion limit / Lower : 0.7 %(V)

flammability limit

2 hPa (72.3 °F / 22.4 °C) Vapor pressure

Relative vapor density

(Air = 1.0)

Relative density No data available

0.88 g/cm3 (68 °F / 20 °C) Density

Solubility(ies)

Water solubility soluble

Partition coefficient: n-

octanol/water

log Pow: 0.21 (73 °F / 23 °C)

608 °F / 320 °C Autoignition temperature

Decomposition temperature not determined

Viscosity Viscosity, dynamic

4.002 mPa.s (77 °F / 25 °C)

Viscosity, kinematic not determined

Explosive properties Not explosive



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Oxidizing properties : The substance or mixture is not classified as oxidizing.

Molecular weight : 117.2 g/mol

## **SECTION 10. STABILITY AND REACTIVITY**

Reactivity : None reasonably foreseeable.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reac-

tions

Hazardous decomposition products formed under fire

conditions.

Conditions to avoid : Heat, flames and sparks.

Exposure to air or moisture over prolonged periods.

Incompatible materials : Strong oxidizing agents

Acids and bases

Hazardous decomposition

products

Carbon monoxide

Carbon dioxide (CO2) Nitrogen oxides (NOx)

### **SECTION 11. TOXICOLOGICAL INFORMATION**

# **Acute toxicity**

Harmful if swallowed.

Toxic in contact with skin or if inhaled.

# **Product:**

Acute oral toxicity

: Assessment: Harmful if swallowed.

Acute inhalation toxicity : Assessment: Toxic if inhaled.

Acute dermal toxicity : Assessment: Toxic in contact with skin.

# **Components:**

#### 2-diethylaminoethanol:

Acute oral toxicity

: LD50 Oral (Rat): 1,320 mg/kg

Acute inhalation toxicity : LC50 (Rat): 4.6 mg/l

Exposure time: 4 h

Acute dermal toxicity : LD50 Dermal (Guinea pig): 885 mg/kg

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Skin corrosion/irritation

Causes severe burns.

**Product:** 

Remarks : Causes severe skin burns and eye damage.

**Components:** 

2-diethylaminoethanol:

Result : Corrosive after 3 minutes to 1 hour of exposure

Serious eye damage/eye irritation

Causes serious eye damage.

**Product:** 

Remarks : Causes serious eye damage.

Components:

2-diethylaminoethanol:

Result : Corrosive

Respiratory or skin sensitization

Skin sensitization

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

**Product:** 

Remarks : No data available

Components:

2-diethylaminoethanol:

Remarks : No significant adverse effects were reported

Germ cell mutagenicity

Not classified based on available information.

**Components:** 

2-diethylaminoethanol:

Germ cell mutagenicity - : Did not show mutagenic effects in animal experiments.

Assessment

Carcinogenicity

Not classified based on available information.

**Product:** 

Remarks : This information is not available.

**Components:** 

2-diethylaminoethanol:

Carcinogenicity - Assess- : Did not show carcinogenic effects in animal experiments.

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ment

**IARC** 

No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**OSHA** 

No component of this product present at levels greater than or equal to 0.1% is

on OSHA's list of regulated carcinogens.

**NTP** 

No ingredient of this product present at levels greater than or equal to 0.1% is

identified as a known or anticipated carcinogen by NTP.

# Reproductive toxicity

Not classified based on available information.

## **Product:**

Effects on fertility

Remarks: No data available

## **Components:**

# 2-diethylaminoethanol:

Reproductive toxicity - As-

Did not show teratogenic effects in animal experiments.

sessment

### STOT-single exposure

Not classified based on available information.

**Product:** 

Remarks : No data available

### STOT-repeated exposure

Not classified based on available information.

**Product:** 

Remarks : No data available

#### Repeated dose toxicity

# Components:

# 2-diethylaminoethanol:

Species : Rat

NOAEL : 50 - 400 mg/kg

Application Route : Oral Exposure time : 2 year

Target Organs : Respiratory system, Skin, Eyes

## **Aspiration toxicity**

Not classified based on available information.

#### **Product:**

No data available



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# Information on likely routes of exposure

**Product:** 

Inhalation : Remarks: Toxic if inhaled.

Skin contact : Remarks: Causes severe skin burns.

Eye contact : Remarks: Causes serious eye damage.

Ingestion : Remarks: Harmful if swallowed.

#### **SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicity** 

**Components:** 

2-diethylaminoethanol:

Toxicity to fish

LC50 (Leuciscus idus (Golden orfe)): > 100 mg/l

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 165 mg/l

Exposure time: 48 h

Toxicity to algae/aquatic

plants

ErC50 (Desmodesmus subspicatus (green algae)): 62.3 mg/l

Exposure time: 72 h

Persistence and degradability

**Components:** 

2-diethylaminoethanol:

Biodegradability

: Result: Readily biodegradable.

**Bioaccumulative potential** 

Components:

2-diethylaminoethanol:

Partition coefficient: n-

octanol/water

log Pow: 0.21 (73 °F / 23 °C)

Mobility in soil

**Components:** 

2-diethylaminoethanol:

Distribution among environmental compartments

: Koc: 72

Other adverse effects

No data available



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#### **SECTION 13. DISPOSAL CONSIDERATIONS**

**Disposal methods** 

Waste from residues : Dispose of in accordance with local regulations.

Contaminated packaging : Empty containers should be taken to an approved waste

handling site for recycling or disposal.

#### **SECTION 14. TRANSPORT INFORMATION**

### **International Regulations**

**IATA-DGR** 

UN/ID No. : UN 2686

Proper shipping name : 2-Diethylaminoethanol

Class : 8
Subsidiary risk : 3
Packing group : II

Labels : Class 8 - Corrosive substances, Class 3 - Flammable liquids

Packing instruction (cargo

aircraft)

855

Packing instruction (passen-

ger aircraft)

851

**IMDG-Code** 

UN number : UN 2686

Proper shipping name : 2-DIETHYLAMINOETHANOL

Class : 8
Subsidiary risk : 3
Packing group : II
Labels : 8 (3)
EmS Code : F-E, S-C
Marine pollutant : no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

## **Domestic regulation**

49 CFR

UN/ID/NA number : UN 2686

Proper shipping name : 2-Diethylaminoethanol

Class : 8
Subsidiary risk : 3
Packing group : II

Labels : Class 8 - Corrosive substances, Class 3 - Flammable liquids

ERG Code : 132 Marine pollutant : no



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#### Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

#### **SECTION 15. REGULATORY INFORMATION**

# **EPCRA - Emergency Planning and Community Right-to-Know**

#### **CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

## SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

## SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

#### SARA 311/312 Hazards

: Flammable (gases, aerosols, liquids, or solids)

Acute toxicity (any route of exposure)

Skin corrosion or irritation

Serious eye damage or eye irritation

SARA 313 : This material does not contain any chemical components with

known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

#### California Prop. 65

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

## The ingredients of this product are reported in the following inventories:

**TCSI** 

: On the inventory, or in compliance with the inventory

TSCA : All substances listed as active on the TSCA inventory

AICS : On the inventory, or in compliance with the inventory

DSL : All components of this product are on the Canadian DSL

ENCS : On the inventory, or in compliance with the inventory

ISHL : On the inventory, or in compliance with the inventory

KECI : On the inventory, or in compliance with the inventory

PICCS : On the inventory, or in compliance with the inventory

IECSC : On the inventory, or in compliance with the inventory



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NZIoC : On the inventory, or in compliance with the inventory

#### **TSCA list**

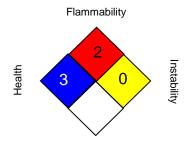
No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

#### **SECTION 16. OTHER INFORMATION**

#### **Further information**

### NFPA 704:



Special hazard

#### HMIS® IV:

HEALTH	1	3
FLAMMABILITY		2
PHYSICAL HAZARD		0

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "\*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

#### Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
NIOSH REL : USA. NIOSH Recommended Exposure Limits

OSHA PO : USA. OSHA - TABLE Z-1 Limits for Air Contaminants -

1910.1000

OSHA Z-1 : USA. Occupational Exposure Limits (OSHA) - Table Z-1 Lim-

its for Air Contaminants

ACGIH / TWA : 8-hour, time-weighted average

NIOSH REL / TWA : Time-weighted average concentration for up to a 10-hour

workday during a 40-hour workweek

OSHA P0 / TWA : 8-hour time weighted average OSHA Z-1 / TWA : 8-hour time weighted average

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC -



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International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate: NTP - National Toxicology Program: NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG -United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

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The information on this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, expressed or implied, regarding its correctness. Some information presented and conclusions drawn herein are from sources other than direct test data on the substance itself. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage, or expense arising out of or in any way connected with handling, storage, use, or disposal of this product. If the product is used as a component in another product, this SDS information may not be applicable.