

# SAFETY DATA SHEET



Revision date: 11-Jul-2024

Revision Number 6

## Section 1: Identification

### Product identifier

**Product Name** DIETHYLETHANOLAMINE

**Product Code(s)** 000030410401

### Other means of identification

**UN number or ID number** 2686

**CAS No.** 100-37-8

**Synonyms** Diethyl ethanolamine; 2-Diethylaminoethanol; N,N-Diethylethanolamine; 2-Diethylaminoethyl alcohol; DEEA.

**Pure substance/mixture** Substance

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

**Recommended use** Chemical intermediate.

**Uses advised against** No information available.

### Details of manufacturer or importer

#### Supplier

IXOM Operations Pty Ltd  
ABN: 51 600 546 512  
Level 8, 1 Nicholson Street  
Melbourne 3000  
Australia

Telephone Number: +61 3 9906 3000

### Emergency telephone number

Emergency telephone number **1 800 033 111 (ALL HOURS)**

Please ensure you refer to the limitations of this Safety Data Sheet as set out in the "Other Information" section at the end of this Data Sheet.

## Section 2: Hazard identification

Classified as a hazardous substance in accordance with the criteria of Safe Work Australia - Globally Harmonized System (GHS).  
Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.

### GHS Classification

<b>Flammable liquids</b>	Category 3
<b>Acute toxicity - Oral</b>	Category 4
<b>Acute toxicity - Dermal</b>	Category 4
<b>Acute toxicity - Inhalation (Vapors)</b>	Category 3
<b>Skin corrosion/irritation</b>	Category 1 Sub-category B

<b>Serious eye damage/eye irritation</b>	Category 1
<b>Specific target organ toxicity (single exposure)</b>	Category 3

**Label elements**

Corrosion  
Flame  
Skull and crossbones  
Exclamation mark

**Signal word**

DANGER

**Hazard statements**

H226 - Flammable liquid and vapor  
H302 - Harmful if swallowed  
H312 - Harmful in contact with skin  
H314 - Causes severe skin burns and eye damage  
H331 - Toxic if inhaled  
H335 - May cause respiratory irritation

**Precautionary Statements - Prevention**

Do not breathe dust/fume/gas/mist/vapors/spray.  
Wash face, hands and any exposed skin thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Use only outdoors or in a well-ventilated area.  
Wear protective gloves/clothing and eye/face protection.  
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
Ground and bond container and receiving equipment.  
Use explosion-proof electrical/ ventilating / lighting/ .? / equipment.  
Use only non-sparking tools.  
Take action to prevent static discharges.

**Precautionary Statements - Response**

Specific treatment (see First aid on this SDS).  
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/physician.  
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
Wash contaminated clothing before reuse.  
IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
Call a POISON CENTER or doctor/physician.  
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
In case of fire: Use extinguishing media as outlined in Section 5 of this Safety Data Sheet to extinguish..

**Precautionary Statements - Storage**

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

**Precautionary Statements - Disposal**

Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable.

**Other hazards which do not result in classification****Section 3: Composition and information on ingredients**

Chemical name	CAS No.	Weight-%
N,N-Diethylethanolamine	100-37-8	>=99

## Section 4: First aid measures

### Description of first aid measures

<b>General advice</b>	For advice, contact a Poisons Information Centre (e.g. phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.
<b>Inhalation</b>	Remove to fresh air. If breathing is difficult, (trained personnel should) give oxygen. Give artificial respiration if victim is not breathing. Call a physician immediately.
<b>Eye contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
<b>Skin contact</b>	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician.
<b>Ingestion</b>	Rinse mouth thoroughly with water. Do NOT induce vomiting. Drink 1 or 2 glasses of water. Get immediate medical attention.

### Most important symptoms and effects, both acute and delayed

<b>Symptoms</b>	Irritation/Corrosion. May cause redness and tearing of the eyes. Erythema (skin redness). Burning. Coughing and/ or wheezing. Difficulty in breathing.
<b>Effects of Exposure</b>	No information available.

### Indication of any immediate medical attention and special treatment needed

<b>Note to physicians</b>	Treat symptomatically. Can cause corneal burns. Symptoms may be delayed. No known specific antidote. Pulmonary oedema prophylaxis. Medical monitoring for at least 24 hours.
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## Section 5: Firefighting measures

### Suitable Extinguishing Media

**Suitable extinguishing media** Dry chemical, CO2, water spray or regular foam.

**Unsuitable extinguishing media** No information available.

### Specific hazards arising from the chemical

**Specific hazards arising from the chemical** Flammable. Most vapors are heavier than air. Vapors may spread along ground and collect in low or confined areas (sewers, basements, tanks). Pay attention to flashback.

**Hazardous combustion products** Carbon oxides. Nitrogen oxides.

### Special protective actions for fire-fighters

**Special protective equipment and precautions for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

**Hazchem code** •2W

## Section 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

**Personal precautions** Avoid contact with skin, eyes and inhalation of vapors. Ensure adequate ventilation. Evacuate personnel to safe areas. Stop leak if you can do it without risk. Do not touch or walk through spilled material. Use personal protective equipment as required. Wash thoroughly after handling. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. Ground and bond all lines and equipment associated with product system. All equipment should be non-sparking. All equipment may need to be explosion-proof based on a risk assessment.

**For emergency responders** Use personal protection recommended in Section 8.

### Environmental precautions

**Environmental precautions** Local authorities should be advised if significant spillages cannot be contained.

### 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** Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Take precautionary measures against static discharges. Use non-sparking tools.

## Section 7: Handling and storage

### Precautions for safe handling

**Advice on safe handling** Do not breathe vapor or mist. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Remove all sources of ignition. Do not eat, drink or smoke when using this product. Take precautionary measures against static discharges. Ground and bond all lines and equipment associated with product system. All equipment should be non-sparking. All equipment may need to be explosion-proof based on a risk assessment. See section 8 for more information.

**General hygiene considerations** Handle in accordance with good industrial hygiene and safety practice. Regular cleaning of equipment, work area and clothing is recommended. Wash hands and face before breaks and immediately after handling the product.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Store locked up. Keep container closed when not in use.

**Incompatible materials** Acids. Oxidizing agent. Copper. Zinc. Galvanised. Iron. Acid anhydrides. Acid chlorides. Halogenated compounds.

## Section 8: Exposure controls and personal protection

### Control parameters

**Exposure Limits**

Chemical name	Australia	New Zealand	ACGIH TLV
N,N-Diethylethanolamine 100-37-8	TWA: 10 ppm TWA: 48 mg/m <sup>3</sup>	TWA: 10 ppm TWA: 48 mg/m <sup>3</sup> Sk*	TWA: 2 ppm Sk*
Chemical name	European Union	United Kingdom	Germany DFG
N,N-Diethylethanolamine 100-37-8	-	-	TWA: 2 ppm TWA: 9.7 mg/m <sup>3</sup> Peak: 2 ppm Peak: 9.7 mg/m <sup>3</sup>

2-Diethylaminoethanol: TWA = 48 mg/m<sup>3</sup> (10 ppm), Sk

As published by Safe Work Australia Workplace Exposure Standards for Airborne Contaminants.

TWA - The time-weighted average airborne concentration of a particular substance when calculated over an eight-hour working day, for a five-day working week.

'Sk' (skin) Notice - absorption through the skin may be a significant source of exposure. The exposure standard is invalidated if such contact should occur.

These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

### Appropriate engineering controls

#### Engineering controls

Apply technical measures to comply with the occupational exposure limits.

If in the handling and application of this material, safe exposure levels could be exceeded, the use of engineering controls such as local exhaust ventilation must be considered and the results documented. If achieving safe exposure levels does not require engineering controls, then a detailed and documented risk assessment using the relevant Personal Protective Equipment (PPE) (refer to PPE section below) as a basis must be carried out to determine the minimum PPE requirements.

### Individual protection measures, such as personal protective equipment

The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

OVERALLS, CHEMICAL GOGGLES, FACE SHIELD, GLOVES (Long), APRON, RUBBER BOOTS.



#### Eye/face protection

Tight sealing safety goggles. If splashes are likely to occur: Face protection shield.

#### Skin and body protection

Rubber boots. Apron. Wear fire/flammable resistant/retardant clothing. Overalls.

#### Hand protection

Elbow-length impervious gloves.

#### Respiratory protection

If determined by a risk assessment an inhalation risk exists, wear an organic vapour/particulate respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

**Environmental exposure controls** No information available.

**Thermal hazards** No information available.

## Section 9: Physical and chemical properties

### Information on basic physical and chemical properties

<b>Physical state</b>	Liquid
<b>Appearance</b>	Clear
<b>Color</b>	Colourless
<b>Odor</b>	Amine -like
<b>Odor threshold</b>	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>pH</b>	11.5 @20°C	None known
<b>pH (as aqueous solution)</b>	No data available	None known
<b>Melting point / freezing point</b>	-68°C	None known
<b>Boiling point / boiling range</b>	162.36°C	None known
<b>Flash point</b>	51.7°C	None known
<b>Evaporation rate</b>	No data available	None known
<b>Flammability (solid, gas)</b>	No data available	None known
<b>Flammability Limit in Air</b>		None known
<b>Upper flammability or explosive limits</b>	10.10% (V)	
<b>Lower flammability or explosive limits</b>	0.7% (V)	
<b>Vapor pressure</b>	No data available	None known
<b>Vapor density</b>	4.03	None known
<b>Relative density</b>	0.88 @20°C	None known
<b>Water solubility</b>	No data available	None known
<b>Solubility(ies)</b>	Miscible in water	None known
<b>Partition coefficient</b>	No data available	None known
<b>Autoignition temperature</b>	>200°C	None known
<b>Decomposition temperature</b>	No data available	None known
<b>Kinematic viscosity</b>	No data available	None known
<b>Dynamic viscosity</b>	No data available	None known

### Other information

## Section 10: Stability and reactivity

### Reactivity

**Reactivity** Reacts with strong oxidising agents. Reacts with strong acids. Reacts with halogenated compounds.

### Chemical stability

**Stability** Stable under normal conditions.

### Explosion data

**Sensitivity to mechanical impact** None.  
**Sensitivity to static discharge** Yes.

### Possibility of hazardous reactions

**Possibility of hazardous reactions** None under normal processing.

**Hazardous polymerization** Hazardous polymerization does not occur.

**Conditions to avoid**

**Conditions to avoid** Heat, flames and sparks.

**Incompatible materials**

**Incompatible materials** Acids. Oxidizing agent. Copper. Zinc. Galvanised. Iron. Acid anhydrides. Acid chlorides. Halogenated compounds.

**Hazardous decomposition products**

**Hazardous decomposition products** Carbon oxides. Nitrogen oxides.

**Section 11: Toxicological information**

**Information on likely routes of exposure**

**Product Information** No adverse health effects expected if the chemical is handled in accordance with this Safety Data Sheet and the chemical label. Symptoms or effects that may arise if the chemical is mishandled and overexposure occurs are:

**Inhalation** Irritating to respiratory system.

**Eye contact** Corrosive to the eyes and may cause severe damage including blindness.

**Skin contact** Causes severe burns.

**Ingestion** Can burn mouth, throat, and stomach.

**Symptoms** Irritation/Corrosion. May cause redness and tearing of the eyes. Erythema (skin redness). Burning. Coughing and/ or wheezing. Difficulty in breathing.

**Acute toxicity**

**Numerical measures of toxicity - Product Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
N,N-Diethylethanolamine	= 1320 mg/kg ( Rat )	= 1 mL/kg ( Rabbit )	= 4.6 mg/L ( Rat ) 4 h

See section 16 for terms and abbreviations

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

**Skin corrosion/irritation** Causes severe burns.

**Serious eye damage/eye irritation** Causes serious eye damage.

**Respiratory or skin sensitization** No information available.

**Germ cell mutagenicity** Not classified.

<b>Carcinogenicity</b>	Not classified.
<b>Reproductive toxicity</b>	No information available.
<b>STOT - single exposure</b>	May cause respiratory irritation.
<b>STOT - repeated exposure</b>	No information available.
<b>Aspiration hazard</b>	No information available.
<b>Chronic effects:</b>	Under certain circumstances nitrosamines can form in contact with nitrosating agents. Some nitrosamines were found to cause cancer in animal experiments.

## Section 12: Ecological information

### Ecotoxicity

**Aquatic ecotoxicity** Keep out of waterways.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
N,N-Diethylethanolamine	EC50: =30mg/L (72h, <i>Desmodesmus subspicatus</i> )	LC50: 1660 - 1920mg/L (96h, <i>Pimephales promelas</i> )	-	EC50: =83.6mg/L (48h, <i>Daphnia magna</i> Straus)

**Terrestrial ecotoxicity** There is no data for this product.

### Persistence and degradability

**Persistence and degradability** Readily biodegradable.

### Bioaccumulative potential

**Bioaccumulation** There is no data for this product.

Chemical name	Partition coefficient
N,N-Diethylethanolamine	0.21

### Mobility

**Mobility** No information available.

### Other adverse effects

**Other adverse effects** No information available.

## Section 13: Disposal considerations

### Waste treatment methods



**Waste from residues/unused products** Dispose of in accordance with federal, state and local regulations.

**Contaminated packaging** Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers. Empty containers should be taken to an approved waste handling site for recycling or disposal.

See section 8 for more information

## Section 14: Transport information

**ADG** Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.

**UN number or ID number** 2686  
**Proper shipping name** 2-DIETHYLAMINOETHANOL  
**Transport hazard class(es)** 8  
**Subsidiary hazard class** 3  
**Packing group** II  
**Hazchem code** •2W

**IATA** Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS.

**UN number** 2686  
**UN proper shipping name** 2-DIETHYLAMINOETHANOL  
**Transport hazard class(es)** 8  
**Subsidiary hazard class** 3  
**Packing group** II

**IMDG** Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.

**UN number** 2686  
**UN proper shipping name** 2-DIETHYLAMINOETHANOL  
**Transport hazard class(es)** 8  
**Subsidiary hazard class** 3  
**Packing group** II  
**IMDG EMS Fire** F-E  
**IMDG EMS Spill** S-C  
**Marine pollutant** Not applicable

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**  
 No information available

## Section 15: Regulatory information

### Safety, health and environmental regulations/legislation specific for the substance or mixture

#### National regulations

##### Australia

Classified as a hazardous substance in accordance with the criteria of Safe Work Australia - Globally Harmonized System (GHS).  
 Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.

See section 8 for national exposure control parameters

**Standard for Uniform Scheduling of Medicines and Poisons (SUSMP)**

No poisons schedule number allocated

**Poison Schedule Number** Not applicable**Australian Industrial Chemicals Introduction Scheme (AICIS)**

Contact supplier for inventory compliance status

Chemical name	Australian Industrial Chemicals Introduction Scheme (AICIS)	Additional information
N,N-Diethylethanolamine - 100-37-8	Present	-

**Illicit Drug Precursors/Reagents**

This product does not contain any substance(s) on the Illicit Drug Precursors/Reagents list.

**International Inventories**

<b>AiIC</b>	This material is listed on the Australian Inventory of Industrial Chemicals.
<b>NZIoC</b>	Contact supplier for inventory compliance status.
<b>TSCA</b>	Contact supplier for inventory compliance status.
<b>DSL/NDSL</b>	Contact supplier for inventory compliance status.
<b>EINECS/ELINCS</b>	Contact supplier for inventory compliance status.
<b>ENCS</b>	Contact supplier for inventory compliance status.
<b>IECSC</b>	Contact supplier for inventory compliance status.
<b>KECL</b>	Contact supplier for inventory compliance status.
<b>PICCS</b>	Contact supplier for inventory compliance status.

**Legend:****AiIC**- Australian Inventory of Industrial Chemicals**NZIoC** - New Zealand Inventory of Chemicals**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**International Regulations****The Montreal Protocol on Substances that Deplete the Ozone Layer** Not applicable**The Stockholm Convention on Persistent Organic Pollutants** Not applicable**The Rotterdam Convention** Not applicable**Section 16: Other information**

Supplier Material Safety Data Sheet , not dated.

**Reason(s) For Issue:** Revised Primary SDS  
Change in Physical Properties

**Prepared By** This Safety Data Sheet has been prepared by IXOM Operations Pty Ltd (Toxicology and SDS Services).

**Revision date:** 11-Jul-2024

**Revision Note:**

The symbol (\*) in the margin of this SDS indicates that this line has been revised.

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

**Legend**

SVHC: Substances of Very High Concern for Authorization:  
PBT: Persistent, Bioaccumulative, and Toxic (PBT) Substances  
vPvB: Very Persistent and very Bioaccumulative (vPvB) Substances  
STOT: Specific Target Organ Toxicity  
ATE: Acute Toxicity Estimate  
LC50: 50% Lethal Concentration  
LD50: 50% Lethal Dose

**Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
C	Carcinogen		

**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)  
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)  
National Institute of Technology and Evaluation (NITE)  
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
Australian Industrial Chemicals Introduction Scheme (AICIS)  
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)  
U.S. 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

**Disclaimer**

**This SDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since IXOM Operations Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.**

**If clarification or further information is needed, the user should contact their IXOM representative or IXOM Operations Pty Ltd at the contact details on page 1.**

**IXOM Operations Pty Ltd's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.**

**End of Safety Data Sheet**