

SAFETY DATA SHEET



Revision date: 03-Jun-2024

Revision Number 6

Section 1: Identification

Product identifier

Product Name AMIETOL M21

Product Code(s) 000030123101

Other means of identification

UN number or ID number 2051

CAS No. 108-01-0

Synonyms 2-Dimethylaminoethanol; Dimethylethanolamine; Dimethylaminoethanol; DMAE; DMEA; N,N-Dimethyl-2-hydroxyethylamine; N,N-Dimethylethanolamine.

Pure substance/mixture Substance

Recommended use of the chemical and restrictions on use

Recommended use Intermediate for the chemical industry. Hardener for epoxy resins. Catalyst for polyurethanes. Additive for textiles.

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

Flammable liquids	Category 3
Acute toxicity - Oral	Category 4
Acute toxicity - Dermal	Category 4
Acute toxicity - Inhalation (Vapors)	Category 4

Skin corrosion/irritation	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 1
Specific target organ toxicity (single exposure)	Category 3

Label elements

Corrosion

Flame

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

H332 - Harmful if inhaled

H335 - May cause respiratory irritation

Precautionary Statements - Prevention

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Keep container tightly closed.

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.

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.

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: Wash with plenty of soap and water.

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

Wash contaminated clothing before reuse.

Call a POISON CENTER or doctor/physician if you feel unwell.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Immediately call a POISON CENTER or doctor/physician.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

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 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

Harmful to aquatic life.

Section 3: Composition and information on ingredients

Chemical name	CAS No.	Weight-%
2-Dimethylaminoethanol	108-01-0	<=100

Section 4: First aid measures**Description of first aid measures**

General advice	For advice, contact a Poisons Information Centre (e.g. phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor. Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
Emergency telephone number	Poisons Information Center, Australia: 13 11 26
Inhalation	Remove to fresh air. If breathing is difficult, (trained personnel should) give oxygen. If breathing has stopped, give artificial respiration. Get medical attention immediately.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	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.
Ingestion	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

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

Indication of any immediate medical attention and special treatment needed

Note to physicians	Treat symptomatically. Can cause corneal burns.
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Section 5: Firefighting measures**Suitable Extinguishing Media**

Suitable extinguishing media	Alcohol resistant foam is the preferred firefighting medium but, if it is not available, fine water spray or water fog can be used.
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Unsuitable extinguishing media	No information available.
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Specific hazards arising from the chemical

Specific hazards arising from the chemical	Corrosive hazard. Wear protective gloves/clothing and eye/face protection. 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.
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Hazardous combustion products	Carbon oxides. Nitrogen oxides.
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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 Attention! Corrosive material. Avoid contact with skin, eyes or clothing. Do not breathe vapor or mist. Evacuate personnel to safe areas. Do not touch or walk through spilled material. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Do not eat, drink or smoke when using this product. Stop leak if you can do it without risk. Take precautionary measures against static discharges. Use personal protective equipment as required. Wash thoroughly after handling.

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. Use only non-sparking tools.

Section 7: Handling and storage**Precautions for safe handling**

Advice on safe handling 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. Avoid contact with skin, eyes or clothing. Do not breathe vapor or mist. Ensure adequate ventilation. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharges. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use personal protection equipment. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Store away from sources of heat or ignition. Keep container closed when not in use.

Incompatible materials Acids. Metals. Oxidizing agents.

Section 8: Exposure controls and personal protection**Control parameters**

Exposure Limits

Chemical name	Australia	New Zealand	ACGIH TLV
2-Dimethylaminoethanol 108-01-0	TWA: 2 ppm TWA: 7.4 mg/m ³ STEL: 6 ppm STEL: 22 mg/m ³	TWA: 2 ppm TWA: 7.4 mg/m ³ STEL: 6 ppm STEL: 22 mg/m ³	-
Chemical name	European Union	United Kingdom	Germany DFG
2-Dimethylaminoethanol 108-01-0	-	TWA: 2 ppm TWA: 7.4 mg/m ³ STEL: 6 ppm STEL: 22 mg/m ³	-

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.

STEL (Short Term Exposure Limit) - the airborne concentration of a particular substance calculated as a time-weighted average over 15 minutes, which should not be exceeded at any time during a normal eight hour work day. According to current knowledge this concentration should neither impair the health of, nor cause undue discomfort to, nearly all workers.

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

Ensure that eyewash stations and safety showers are close to the workstation location. 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

Boots. Apron. 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 or an air supplied mask 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

Physical state Liquid
Appearance Clear
Color Light yellow
Odor Ammoniacal
Odor threshold No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	10.5-11.0 at 100 g/L, 20°C	None known
pH (as aqueous solution)	No data available	None known
Melting point / freezing point	-70°C (lit.)	None known
Boiling point / boiling range	134-136 (lit.)	None known
Flash point	39°C	CC (closed cup)
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	12.2% (V)	
Lower flammability or explosive limits	1.4% (V)	
Vapor pressure	8.16 hPa at 20°C	None known
Vapor density	3.08 (air=1)	None known
Relative density	0.886 @20°C	None known
Water solubility	Miscible in water	None known
Solubility(ies)	No data available	None known
Partition coefficient	log Pow: -0,549 at 23°C	None known
Autoignition temperature	230°C at 1.013 hPa	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

Other information

Section 10: Stability and reactivity

Reactivity

Reactivity Reacts with acids.

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 Do not use nitrosating agents with this product since nitrosamines may form. Some

nitrosamines have been shown to be carcinogenic in tests with laboratory animals.

Conditions to avoid

Conditions to avoid Heat, flames and sparks. Static discharge (electrostatic discharge).

Incompatible materials

Incompatible materials Acids. Metals. Oxidizing agents.

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. Harmful by inhalation.

Eye contact Causes serious eye damage.

Skin contact Causes severe burns. Harmful in contact with skin.

Ingestion Can burn mouth, throat, and stomach. Harmful if swallowed.

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
2-Dimethylaminoethanol	= 1803 mg/kg (Rat)	= 1220 mg/kg (Rabbit)	= 1641 ppm (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 Not a skin sensitiser (guinea pig).

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

Carcinogenicity Not listed as carcinogenic according to IARC.

(IARC - International Agency for Research on Cancer).

Reproductive toxicity No information available.**STOT - single exposure** May cause respiratory irritation.**STOT - repeated exposure** No information available.**Aspiration hazard** No information available.**Section 12: Ecological information****Ecotoxicity****Aquatic ecotoxicity** Keep out of waterways. Harmful to aquatic life.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
2-Dimethylaminoethanol	EC50: =35mg/L (72h, <i>Desmodesmus subspicatus</i>)	LC50: =81mg/L (96h, <i>Pimephales promelas</i>)	-	EC50: =98.77mg/L (48h, <i>Daphnia magna</i>)

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.**Component Information**

Chemical name	Partition coefficient
2-Dimethylaminoethanol	-0.55

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** Dispose of in accordance with federal, state and local regulations.

products

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 2051
Proper shipping name 2-DIMETHYLAMINOETHANOL
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 2051
UN proper shipping name 2-DIMETHYLAMINOETHANOL
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 2051
UN proper shipping name 2-DIMETHYLAMINOETHANOL
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
2-Dimethylaminoethanol - 108-01-0	Present	-

Illicit Drug Precursors/Reagents

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

National pollutant inventory

Subject to reporting requirement

Chemical name	National pollutant inventory
2-Dimethylaminoethanol - 108-01-0	20 MW Threshold category 2b total 60000 MWH Threshold category 2b total 1 tonne/h Threshold category 2a total 25 tonne/yr Threshold category 1a total 400 tonne/yr Threshold category 2a total 2000 tonne/yr Threshold category 2b total

International Inventories

AIIC	This material is listed on the Australian Inventory of Industrial Chemicals.
NZIoC	Contact supplier for inventory compliance status.
TSCA	Contact supplier for inventory compliance status.
DSL/NDSL	Contact supplier for inventory compliance status.
EINECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
IECSC	Contact supplier for inventory compliance status.
KECL	Contact supplier for inventory compliance status.
PICCS	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 Safety Data Sheet , not dated.

Reason(s) For Issue: 5 Yearly Revised Primary SDS

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

Revision date: 03-Jun-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