

Australian statement of hazardous nature : Classified as hazardous according to criteria of Safe Work Australia

Section 1 - Identification

Product Name N,N-Dimethylaniline

CAS No 121-69-7

Synonyms DMA

Product Code A11916

Address ThermoFisher Scientific Australia Pty Ltd
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VICTORIA 3179, Australia

Emergency Tel. **CHEMTREC®**
03 9757 4559 or +613 9757 4559

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Recommended Use Laboratory chemicals.

Uses advised against This product does not contain any substance(s) on the Illicit Drug Precursors/Reagents list. This product does not contain any substance(s) subject to Prohibition, Authorization or Restriction. This product does not contain any substance(s) listed on the voluntary National Code of Practice for Chemicals of Security Concern.

Section 2 - Hazard(s) Identification

Classification under Safe Work Australia

Classified as hazardous according to criteria of Safe Work Australia

Physical hazards
No hazards identified

Health hazards

Acute Oral Toxicity	Category 3
Acute Dermal Toxicity	Category 3
Acute Inhalation Toxicity - Vapors	Category 3
Carcinogenicity	Category 2

Environmental hazards

Chronic aquatic toxicity	Category 2
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Label Elements



Skull and Crossbones



Health Hazard



Environment

Signal Word**Danger****Hazard Statements**

H351 - Suspected of causing cancer

H411 - Toxic to aquatic life with long lasting effects

H301 + H311 + H331 - Toxic if swallowed, in contact with skin or if inhaled

Combustible liquid

Precautionary Statements

P201 - Obtain special instructions before use

P202 - Do not handle until all safety precautions have been read and understood

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

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

P264 - Wash face, hands and any exposed 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

P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing

P311 - Call a POISON CENTER or doctor

P330 - Rinse mouth

P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish

P361 + P364 - Take off immediately all contaminated clothing and wash it before reuse

P405 - Store locked up

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

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

Other information

Toxic to terrestrial vertebrates

Section 3 - Composition and Information on Ingredients

Component	CAS No	Weight %
Dimethylaniline	121-69-7	>95

Section 4 - First Aid Measures**Inhalation**

Remove from exposure, lie down. Remove to fresh air. If not breathing, give artificial respiration. Immediate medical attention is required.

Ingestion

Call a physician immediately. Clean mouth with water.

Skin Contact

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediate medical attention is required.

Eye Contact	Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
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.
First Aid Facilities	Eyewash, safety shower and washroom.
Most important symptoms and effects	Difficulty in breathing. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting
Notes to Physician	Treat symptomatically.

Section 5 - Fire Fighting Measures

Suitable Extinguishing Media

Carbon dioxide (CO₂). Dry chemical. Water mist may be used to cool closed containers. Water mist may be used to cool closed containers.

Extinguishing media which must not be used for safety reasons

Water may be ineffective.

Hazardous Decomposition Products

Nitrogen oxides (NO_x), Carbon monoxide (CO), Carbon dioxide (CO₂).

Specific Hazards Arising from the Chemical

Combustible material. Containers may explode when heated.

Special protective equipment and precautions for fire fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Section 6 - Accidental Release Measures

Emergency procedures

Remove all sources of ignition. Take precautionary measures against static discharges.

Environmental Precautions

Do not flush into surface water or sanitary sewer system.

Methods for Containment and Clean Up

Clean-up methods - small spillage

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal. Wear self-contained breathing apparatus and protective suit. Do not let this chemical enter the environment. Remove all sources of ignition.

Clean-up methods - large spillage

Typically only supplied in small quantities as packaged goods.

If extremely toxic or used in larger quantities ensure a spillage action plan is in place. Evacuate area. Control the source and/or contain the spill if safe and able to do so. Use temporary diking, sand bags, dry sand, earth or proprietary booms/absorbent pads if available. Obtain advice on containment, neutralisation and clean-up from local emergency responders.

Reference to Other Sections

Refer to protective measures listed in Sections 8 and 13.

Section 7 - Handling and Storage

Precautions for Safe Handling

Do not breathe mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Take precautionary measures against static discharges. Do not ingest. If swallowed then seek immediate medical assistance. Handle product only in closed system or provide appropriate exhaust ventilation. Keep away from open flames, hot surfaces and sources of ignition.

Conditions for Safe Storage, Including any Incompatibilities

Keep away from heat, sparks and flame. Protect from direct sunlight. Keep containers tightly closed in a dry, cool and well-ventilated place.

AS/NZS 2243.10:2004, Safety in laboratories - Storage of chemicals

AS 1940-2004 - The storage and handling of flammable and combustible liquids

Section 8 - Exposure Controls and Personal Protection

Exposure limits

AUS - Exposure Standards for Atmospheric Contaminants in the Occupational Environment - Guidance Note on the Interpretation of Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:3008(1995)]

Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995)]

updated in August, 2005. Safe Work Australia **ACGIH** - Threshold Limit Values - Ceiling (TLV-C) guidelines by the American Conference of Governmental Industrial Hygienists (ACGIH) for controlling worker exposure to airborne chemical concentrations in the workplace. **UK** - EH40/2005 Work Exposure Limits, Fourth edition. Published 2020. **DE** - MAK and BAT values of Hazardous Chemical Compounds in the Work Area. Published by German Research Foundation on July 1, 2011

Component	Australia	New Zealand WEL	ACGIH TLV	The United Kingdom	Germany
Dimethylaniline	STEL: 10 ppm STEL: 50 mg/m ³ TWA: 5 ppm TWA: 25 mg/m ³ TWA: 2 ppm TWA: 7.6 mg/m ³	TWA: 5 ppm TWA: 25 mg/m ³ STEL: 10 ppm STEL: 50 mg/m ³ Skin	TWA: 5 ppm STEL: 10 ppm Skin	STEL: 10 ppm 15 min STEL: 50 mg/m ³ 15 min TWA: 5 ppm 8 hr TWA: 25 mg/m ³ 8 hr Skin	TWA: 5 ppm (8 Stunden). AGW - exposure factor 2 TWA: 25 mg/m ³ (8 Stunden). AGW - exposure factor 2 TWA: 5 ppm (8 Stunden). MAK TWA: 25 mg/m ³ (8 Stunden). MAK Höhepunkt: 10 ppm Höhepunkt: 50 mg/m ³ Haut

Biological limit values

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

Exposure Controls**Engineering Measures**

Ensure adequate ventilation, especially in confined areas.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

Personal protective equipment**Eye Protection**

Goggles (Australian/New Zealand Standard AS/NZS 1337 - Eye protectors for Industrial applications)

Hand Protection

Protective gloves

Glove material	Breakthrough time	Glove thickness	AUS/NZ Standard	Glove comments
Natural rubber	See manufacturers recommendations	-	AS/NZS 2161	(minimum requirement)
Nitrile rubber				
Neoprene				
PVC				

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves.
(Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

Skin and body protection	Wear appropriate protective gloves and clothing to prevent skin exposure
Respiratory Protection	Use an AS/NZS 1716 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained in line with AS/NZS 1715 on the use and maintenance of respiratory protective devices
Recommended Filter type:	Particulates filter conforming to EN 143 Ammonia and organic ammonia derivatives filter Type K Green conforming to EN14387 (or AUS/NZ equivalent)
Recommended half mask:-	Valve filtering: EN405 or Half mask: EN140 plus filter, EN 141 (or AUS/NZ equivalent) When RPE is used a face piece Fit Test should be conducted
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice.
Environmental exposure controls	Prevent product from entering drains. Do not allow material to contaminate ground water system.

Section 9 - Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance	Yellow	
Physical State	Liquid	
Odor	Fishy	
Odor Threshold	No data available	
pH	7.4	1 g/l water
Melting Point/Range	1.5 - 2.5 °C / 34.7 - 36.5 °F	
Softening Point	No data available	
Boiling Point/Range	193 - 194 °C / 379.4 - 381.2 °F	@ 760 mmHg
Flash Point	63 °C / 145.4 °F	Method - No information available
Evaporation Rate	No data available	
Flammability (solid,gas)	Not applicable	Liquid
Explosion Limits	Lower 1.2 Upper 7	
Vapor Pressure	0.53 mbar @ 20 °C	
Vapor Density	No information available	(Air = 1.0)
Specific Gravity / Density	0.950	
Bulk Density	Not applicable	Liquid
Water Solubility	1 g/L (20°C)	
Solubility in other solvents	No information available	
Partition Coefficient (n-octanol/water)		
Component	log Pow	
Dimethylaniline	2.278	
Autoignition Temperature	370 °C / 698 °F	
Decomposition Temperature	No data available	
Viscosity	No data available	
Explosive Properties		explosive air/vapour mixtures possible
Oxidizing Properties	No information available	
Other information		
Molecular Formula	C8 H11 N	
Molecular Weight	121.18	

Section 10 - Stability and Reactivity

Reactivity	None known, based on information available
Stability	Stable under normal conditions.
Conditions to Avoid	Excess heat, Exposure to air, Exposure to light, Incompatible products, Keep away from open flames, hot surfaces and sources of ignition.
Incompatible Materials	Acids, Strong oxidizing agents, Halogens, Acid anhydrides, Acid chlorides, Chloroformates.
Hazardous Decomposition Products	Nitrogen oxides (NOx). Carbon monoxide (CO). Carbon dioxide (CO ₂).
Hazardous Polymerization	Hazardous polymerization does not occur.

Section 11 - Toxicological Information

Information on Toxicological Effects

Product Information

(a) acute toxicity;	
Oral	Category 3
Dermal	Category 3
Inhalation	Category 3

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Dimethylaniline	LD50 = 951 mg/kg (Rat)	LD50 = 1770 mg/kg (Rabbit)	LC50 > 0.5 - 5.0 mg/L (Rat) 4 h

(b) skin corrosion/irritation; Based on available data, the classification criteria are not met

(c) serious eye damage/irritation; Based on available data, the classification criteria are not met

(d) respiratory or skin sensitization;
 Respiratory Based on available data, the classification criteria are not met
 Skin Based on available data, the classification criteria are not met

(e) germ cell mutagenicity; Based on available data, the classification criteria are not met

(f) carcinogenicity; Category 2
The table below indicates whether each agency has listed any ingredient as a carcinogen

(g) reproductive toxicity; Based on available data, the classification criteria are not met

(h) STOT-single exposure; Based on available data, the classification criteria are not met

(i) STOT-repeated exposure; Based on available data, the classification criteria are not met
 Target Organs None known.

(j) aspiration hazard; Based on available data, the classification criteria are not met

Symptoms / effects, both acute and delayed Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting

Section 12 - Ecological Information

Ecotoxicity effects

The product contains following substances which are hazardous for the environment. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Component	Freshwater Fish	Water Flea	Freshwater Algae	Microtox
Dimethylaniline	LC50: 0.183 - 0.186 mg/L, 96h (Brachydanio rerio) LC50: = 52.6 mg/L, 96h flow-through (Pimephales promelas) LC50: = 65.6 mg/L, 96h (Pimephales promelas) LC50: = 51.1 mg/L, 96h semi-static (Brachydanio rerio) LC50: = 53.7 mg/L, 96h semi-static (Poecilia reticulata)	EC50: = 5 mg/L, 48h (Daphnia magna)	EC50: = 340 mg/L, 96h (Desmodesmus subspicatus)	EC50 = 110 mg/L 24 h EC50 = 13.6 mg/L 5 min EC50 = 14.6 mg/L 30 min

Persistence and Degradability

Not readily biodegradable

Persistence

Persistence is unlikely.

Degradation in sewage treatment plant

Contains substances known to be hazardous to the environment or not degradable in waste water treatment plants.

Bioaccumulative Potential

Bioaccumulation is unlikely

Component	log Pow	Bioconcentration factor (BCF)
Dimethylaniline	2.278	4.7 - 13.6 dimensionless

Mobility

The product is water soluble, and may spread in water systems. : Will likely be mobile in the environment due to its water solubility Highly mobile in soils

Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors

Persistent Organic Pollutant

This product does not contain any known or suspected substance

Ozone Depletion Potential

This product does not contain any known or suspected substance

Section 13 - Disposal Considerations

Waste from Residues/Unused Products

Do not allow into drains or watercourses or dispose of where ground or surface waters may be affected. Wastes, including emptied containers, are controlled wastes and should be disposed of in accordance with all federal, E.P.A., state and local regulations. Assure conformity with all applicable regulations.

Contaminated Packaging

Dispose of this container to hazardous or special waste collection point.

Other Information

Chemical wastes should be disposed through a licensed commercial waste collection service. Do not flush to sewer. Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains. Do not let this chemical enter the environment.

Section 14 - Transport Information

IMDG/IMO

UN-No	UN2253
Proper Shipping Name	N,N-DIMETHYLANILINE
Hazard Class	6.1
Packing Group	II

ADG

UN-No UN2253
Proper Shipping Name N,N-DIMETHYLANILINE
Hazard Class 6.1
Packing Group II

Component	Hazchem Code
Dimethylaniline 121-69-7 (>95)	3Z

IATA

UN-No UN2253
Proper Shipping Name N,N-DIMETHYLANILINE
Hazard Class 6.1
Packing Group II

Environmental hazards Dangerous for the environment
Product is a marine pollutant according to the criteria set by IMDG/IMO

Special Precautions No special precautions required

Additional information None known

Section 15 - Regulatory Information**Safety, health and environmental regulations/legislation specific for the substance or mixture****National Regulations** Australia

See section 8 for national exposure control parameters.

Standard for the Uniform Scheduling of Medicines and Poisons

No poison schedule number allocated.

Australian Industrial Chemicals Introduction Scheme (AICIS)

Component	Australian Industrial Chemicals Introduction Scheme (AICIS)	Additional information
Dimethylaniline - 121-69-7	Present	-

Australian - Illicit Drug Precursors/Reagents Substance List

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

Chemicals of Security Concern

This product does not contain any substance(s) listed on the voluntary National Code of Practice for Chemicals of Security Concern

National pollutant inventory Not applicable

Prohibition or notification/licensing requirements

Shown below are details of specific prohibition/notifications or licencing requirements when they apply.

This product does not contain any substance(s) subject to Prohibition, Authorization or Restriction.

International Inventories

Component	AICS	NZIoC	EINECS	ELINCS	TSCA	DSL	NDL	PICCS	ENCS	ISHL	IECSC	KECL
Dimethylaniline	X	X	204-493-5	-	X	X	-	X	X	X	X	KE-05-0532

Legend: X - Listed. '-' - Not Listed. TP - Indicates a substance that is the subject of a proposed TSCA Section 4 test rule. **KECL** - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

International Regulations

Ozone Depletion Potential This product does not contain any known or suspected substance

Persistent Organic Pollutant This product does not contain any known or suspected substance

Rotterdam Convention (PIC) Not applicable

Basel convention on the control of transboundary movements of hazardous wastes and their disposal
Not applicable.

Component	CAS No	OECD HPV	Restriction of Hazardous Substances (RoHS)	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements
Dimethylaniline	121-69-7	Listed	Not applicable	Not applicable	Not applicable

Authorisation/Restrictions according to EU REACH

Component	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Dimethylaniline	-	Use restricted. See item 75. (see link for restriction details)	-

<https://echa.europa.eu/substances-restricted-under-reach>

Section 16 - Other Information**Legend**

AICS - Australian Inventory of Chemical Substances
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List
IECSC - Chinese Inventory of Existing Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
TWA - Time Weighted Average
IARC - International Agency for Research on Cancer
ICAO/IATA - International Civil Aviation Organization/International Air Transport Association
MARPOL - International Convention for the Prevention of Pollution from

NZIoC - New Zealand Inventory of Chemicals
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
ENCS - Japanese Existing and New Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
CAS - Chemical Abstracts Service
ACGIH - American Conference of Governmental Industrial Hygienists
PNEC - Predicted No Effect Concentration
IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code

Ships

NZS 5433:2012 - Transport of Dangerous Goods on Land

LD50 - Lethal Dose 50%

EC50 - Effective Concentration 50%

WEL - Workplace Exposure Limit

DNEL - Derived No Effect Level

POW - Partition coefficient Octanol:Water

vPvB - very Persistent, very Bioaccumulative

VOC - (Volatile Organic Compound)

ADG Australian Code for the Transport of Dangerous Goods by Road and Rail

OECD - Organisation for Economic Co-operation and Development

LC50 - Lethal Concentration 50%

ATE - Acute Toxicity Estimate

RPE - Respiratory Protective Equipment

NOEC - No Observed Effect Concentration

BCF - Bioconcentration factor

PBT - Persistent, Bioaccumulative, Toxic

Key literature references and sources for data

<https://echa.europa.eu/information-on-chemicals>

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

Training Advice

Chemical incident response training.

Revision Date

18-Nov-2022

Revision Summary

Not applicable.

This Safety Data Sheet (SDS) is prepared in accordance to and complies with the requirements of Safe Work Australia - Work Health and Safety Regulations (WHS Regulations).

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