SAFETY DATA SHEET

according to 1907/2006/EC, Article 3

Version no. : 2.0
Prepared on : 02.03.2026
Revised on : -

SECTION 1: Identification of the substance/mixture and of the company/undertaking.

1.1 Product identifiers

Product name	N-Methyldiethanolamine
Product Number	PSR50249
Brand	PureSynth research chemicals
CAS No.	105-59-9

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Company

PureSynth Research Chemicals GmbH.

64683 Einhausen Marie-Curie-StraBe. 3, Germany

1.4 Emergency telephone number

Worldwide Helpline No.: 1800-8908-260

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Eye irritation, (Category 2) — H319: Causes serious eye irritation.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram

Signal word Warning

Hazard statement(s)

H319	Causes serious eye irritation.

Precautionary statement(s)

P264	Wash skin thoroughly after handling.
P280	Wear eye protection/ face protection.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313	If eye irritation persists: Get medical advice/ attention.

Other hazards: This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition / information on ingredients

3.1 Substances

Common names & Synonyms	Mol. formula	CAS number
2,2'-Methyliminodiethanol MDEA N,N-Diethanolmethylamin N,N-Bis(2-hydroxyethyl) methylamine	$C_5H_{13}NO_2$	105-59-9

Component	Classification	Concentration
N-Methyldiethanolamine	Eye Irrit. 2; H319	<= 100 %

SECTION 4: First aid measures

Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance.
If inhaled	After inhalation: fresh air.
In case of skin contact	In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.
In case of eye contact	After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.
If swallowed	After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.
Most important symptoms and effects, both acute and delayed	The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
Indication of any immediate medical attention and special treatment needed	No data available

SECTION 5: Fire fighting measures

Extinguishing media

Suitable extinguishing media	Water Foam Carbon dioxide (CO2) Dry powder
Unsuitable extinguishing media	For this substance/mixture no limitations of extinguishing agents are given.
Special hazards arising from the substance or mixture	Carbon oxides Nitrogen oxides (NOx) Combustible. Vapours are heavier than air and may spread along floors. Forms explosive mixtures with air on intense heating. Development of hazardous combustion gases or vapours possible in the event of fire.
Advice for fire-fighters	In the event of fire, wear self-contained breathing apparatus.

Further information	Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures	Advice for non-emergency personnel: Do not breathe vapours, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.
Environmental precautions	Do not let product enter drains.
Methods and materials for containment and cleaning up	Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material. Dispose of properly. Clean up affected area.
Reference to other sections	For disposal see section 13.

SECTION 7: Handling and storage

Precautions for safe handling	For precautions see section 2.2
Conditions for safe storage, including any incompatibilities	Tightly closed. Storage class (TRGS 510): 10: Combustible liquids
Specific end use(s)	Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls / Personal protection

Control parameters	Ingredients with workplace control parameters
Exposure controls	Personal protective equipment
Appropriate engineering controls	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
Personal protective equipment:	
Eye / face protection	Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses
Hand protection	No data available
Skin protection	This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves Full contact Material: butyl-rubber Minimum layer thickness: 0.7 mm Break through time: 480 min This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves. Splash contact Material: Nitrile rubber Minimum layer thickness: 0.4 mm Break through time: 60 min
Body protection	protective clothing
Respiratory protection	Recommended Filter type: Filter A (acc. to DIN 3181) for vapours of organic compounds.

	The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.
Control of environmental exposure	Do not let product enter drains.

SECTION 9: Physical and chemical properties

Appearance	Form: clear, viscous liquid Colour: light yellow
Odour	ammoniacal
pH - Value	11.5 at 100 g/l at 20 °C
Density	1.038 g/cm3 at 25 °C - lit.
Boiling Point	246 - 248 °C - lit
Melting Point	-21,3 °C at 1.013 hPa - (ECHA)
Solubility in water	1000 g/l at 20 °C - completely miscible
Flash point	127 °C - closed cup
Vapour pressure	0.01 hPa at 20 °C
Auto -ignition temperature	280 °C at 1013 hPa - DIN 51794
Vapour density	No data available
Flammability (solid, gas)	No data available
Evaporation rate	No data available
Partition coefficient: n- octanol / water	log Pow: -1.08 at 25 °C - Bioaccumulation is not expected
Viscosity	Viscosity, kinematic: 99.05 mm2/s at 20 °C Viscosity, dynamic: 101 mPa.s at 20 °C
Explosive properties	Not classified as explosive.
Upper / lower flammability or explosive limits	No data available
Oxidizing properties	none

Other safety information: No data available

SECTION 10: Stability and reactivity

Reactivity	Forms explosive mixtures with air on intense heating. A range from approx. 15 Kelvin below the flash point is to be rated as critical.
Chemical stability	The product is chemically stable under standard ambient conditions (room temperature).
Possibility of hazardous reactions	Exothermic reaction with: acid halides acids Strong oxidizing agents
Condition to avoid	Strong heating.
Incompatible materials	No data available
Hazardous decomposition products	In the event of fire: see section 5

SECTION 11: Toxicological information

Acute toxicity	LD50 Oral - Rat - male and female - 4680 mg/kg (OECD Test Guideline 401)

	Symptoms: Possible damages: mucosal irritations LD50 Dermal - Rabbit - 6230 mg/kg Remarks: (RTECS)
Skin corrosion/irritation	Skin - Rabbit Result: No skin irritation (OECD Test Guideline 404)
Serious eye damage/eye irritation	Eyes - Rabbit Result: Irritating to eyes. (OECD Test Guideline 405) Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)
Respiratory or skin sensitization	Maximisation Test - Guinea pig Result: negative (OECD Test Guideline 406)
Germ cell mutagenicity	Test Type: Ames test Test system: Salmonella typhimurium Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative Test Type: Chromosome aberration test in vitro Test system: rat hepatocytes Metabolic activation: without metabolic activation Method: OECD Test Guideline 473 Result: negative Test Type: In vitro mammalian cell gene mutation test Test system: Chinese hamster ovary cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: negative Test Type: Micronucleus test Species: Mouse Cell type: Red blood cells (erythrocytes) Application Route: Intraperitoneal Method: OECD Test Guideline 474 Result: negative
Carcinogenicity	No data available
Reproductive toxicity	No data available
Specific target organ toxicity - single exposure	No data available
Specific target organ toxicity - repeated exposure	No data available
Aspiration hazard	No data available
Additional Information	Assessment: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. Repeated dose toxicity - Rat - male and female - Dermal - 13 Weeks Cough, Shortness of breath, Headache, Nausea, Vomiting To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Handle in accordance with good industrial hygiene and safety practice.

SECTION 12: Ecological information

Toxicity

Toxicity to fish	static test LC50 - Leuciscus idus (Golden orfe) - 1.466 mg/l - 96 h (DIN 38412 part 15)
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - 233 mg/l - 48 h (Regulation (EC) No. 440/2008, Annex, C.2)
Toxicity to algae	static test ErC50 - Desmodesmus subspicatus (green algae) - > 100 mg/l - 72 h (DIN 38412)
Toxicity to bacteria	EC50 - Pseudomonas putida - 410 mg/l - 17 h Remarks: (External MSDS)
Persistence and degradability	No data available
Biodegradability	Biodegradability aerobic - Exposure time 18 d Result: 96 % - Readily biodegradable. (OECD Test Guideline 301A)
Bio accumulative potential	No data available
Mobility in soil	No data available
Results of PBT and vPvB assessment	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
Endocrine disrupting properties	Assessment: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
Other adverse effects	Biological effects: Neutralise before sewage disposal. Discharge into the environment must be avoided.

SECTION 13: Disposal considerations

Waste treatment methods **Products**	No data available
Contaminated packaging	No data available

SECTION 14: Transport information

	UN no.	UN proper shipping name	Hazard Class(es)	Packaging group	Marine Pollutant
ADR / RID	-	Not dangerous goods	-	-	no
IMDG	-	Not dangerous goods	-	-	no
IATA	-	Not dangerous goods	-	-	no

SECTION 15: Regulatory information

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

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

Chemical safety assessment

For this product a chemical safety assessment was not carried out

SECTION 16: Other information

The information in this SDS is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. The user must be determined suitability of this information for his application.