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

1.1. Product identifier

Trade name : **N,N,N',N'-TETRAMETHYL ETHYLENEDIAMINE (TEMED) AR**

Product code : 26500

Identification of the product : N,N,N',N'-TETRAMETHYL ETHYLENEDIAMINE (TEMED) AR

CAS No : 110-18-9

EC Index-No. : 612-103-00-3

EC No. : 203-744-6

Synonyms : Tetramethylethylenediamine

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 identification

MOLYCHEM INDIA LLP
Office: Maker Tower 'E', 41-A2, 4th Floor, Above Maker Arcade, Cuffe Parade, Mumbai 400 005 (INDIA)
Tel: +91 22 4066 8111, 2205 7772 .
Email : info@molychem.net
Works: Plot No. B/9, Badlapur M.I.D.C., OPP.Shobhavat Textile Co., Kulgaon, Badlapur (E), Dist.-Thane-421 503.

1.4. Emergency telephone number

Emergency number : +91 22 4066 8111 (10:00am - 6:00 pm)

2. Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flammable liquids, Category 2	H225
Acute toxicity (oral), Category 4	H302
Acute toxicity (inhal.), Category 4	H332
Skin corrosion/irritation, Category 1, Sub-Category 1B	H314

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

Highly flammable liquid and vapour. Harmful if inhaled. Harmful if swallowed. Causes severe skin burns and eye damage.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



GHS02 GHS05

Signal word (CLP) : Danger

Hazard statements (CLP) : H225 - Highly flammable liquid and vapour.
H302+H332 - Harmful if swallowed or if inhaled.
H314 - Causes severe skin burns and eye damage.

Precautionary statements (CLP) : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280 - Wear protective gloves, protective clothing, eye protection, face protection.
P301+P312 - IF SWALLOWED: Call a POISON CENTRE or doctor if you feel unwell.
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water .
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

2.3. Other hazards

Contains no PBT/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

3. Composition/information on ingredients

3.1. Substances

Name : N,N,N',N'-TETRAMETHYL ETHYLENEDIAMINE (TEMED) AR

CAS-No : 110-18-9

3.2. Mixtures

Not applicable

4. First aid measures

4.1. Description of first aid measures

First-aid measures general : Call a physician immediately.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. Call a poison center or a doctor if you feel unwell.

First-aid measures after skin contact : Rinse skin with water/shower. Take off immediately all contaminated clothing. Immediately call a POISON CENTER/doctor. Call a physician immediately.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor. Call a physician immediately.

First-aid measures after ingestion : Rinse mouth. Call a POISON CENTER/doctor if you feel unwell. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor. Do not induce vomiting. Call a physician immediately.

First-aid measures for first aider : First aid workers will be equipped with suitable personal protective equipment.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation : Harmful if inhaled.

Symptoms/effects after skin contact : Burns.

Symptoms/effects after eye contact : Serious damage to eyes.

Symptoms/effects after ingestion : Harmful if swallowed. Burns.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

5. Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : dry chemical powder, alcohol-resistant foam, carbon

dioxide (CO_2). Water spray. Dry powder. Foam. Carbon dioxide.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Highly flammable liquid and vapour

Explosion hazard : May form flammable/explosive vapour-air mixture.

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3 Advice for firefighters

Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking. Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material damage.

6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.

Emergency procedures : Ventilate spillage area. Evacuate unnecessary personnel. No open flames, no sparks, and no smoking. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Use personal protective equipment as required. For further information refer to section 8: "Exposure controls/ personal protection"

Emergency procedures : Stop release. Evacuate unnecessary personnel. Stop leak if safe to do so.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material. Collect spillage. On land, sweep or shovel into suitable containers. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Notify authorities if product enters sewers or public waters.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

7. Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : No open flames. No smoking. Use only non-sparking tools. Do not breathe dust/fume/gas/mist/vapours/spray. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Take precautionary measures against static discharge. Flammable vapours may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Use only outdoors or in a well-ventilated area. Avoid contact with skin and eye

Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands, forearms and face thoroughly after handling. Wash contaminated clothing before reuse. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof

		electrical/ventilating/lighting equipment. Comply with applicable regulations.
	Storage conditions	: Keep in fireproof place. Keep container tightly closed. Store in original container. Store in a well-ventilated place. Keep cool. Store locked up.
	Storage away from	: Open flame. Direct sunlight. Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

7.3. Specific end use(s)

No additional information available

8. Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Eye protection	: Chemical goggles or safety glasses
Hand protection	: Wear protective gloves
Skin protection	: Wear suitable protective clothing
Respiratory protection	: Wear appropriate mask.

8.2.3 Environmental exposure controls

Avoid release to the environment

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Clear liquid
Molecular mass	: 116.21 g/mol
Colour	: Pale yellow
Odour	: amine like
Odour threshold	: Not available
pH	: 8 – 8.5 at 20 °C
Melting point	: Not applicable

Freezing point	: -55 °C
Boiling point	: 120 – 122 °C
Flash point	: 20 °C
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
Flammability (solid, gas)	: Flammable Highly flammable liquid and vapour.
Vapour pressure	: 10 mm Hg at 20°C
Relative vapour density at 20 °C	: 4
Relative density	: Not available
Density	: 0.774 – 0.776g
Solubility	: Water: Miscible with water
Partition coefficient n-octanol/water (Log Kow)	: Not available
Viscosity, kinematic	: Not available

9.2. Other information

No additional information available

10. Stability and reactivity

10.1. Reactivity

Thermal decomposition generates : Corrosive vapours. Highly flammable liquid and vapour.

10.2. Chemical stability

Highly flammable liquid and vapour. May form flammable/explosive vapour-air mixture.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Open flame. Direct sunlight. Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

No additional information available

10.6 Hazardous decomposition products

May release flammable gases. Thermal decomposition generates : Corrosive vapours.

11. Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Harmful if swallowed

Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Harmful if inhaled.
Skin corrosion/irritation	: Causes severe skin burns.
Additional information	: Not classified
Serious eye damage/irritation	: Assumed to cause serious eye damage
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

12. Ecological information

12.1. Toxicity

Ecology - general	Before neutralisation, the product may represent a danger to aquatic organisms.
Hazardous to the aquatic environment, short-term (acute)	Not classified
Hazardous to the aquatic environment, long-term (chronic)	Not classified

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5 Results of PBT and vPvB assessment

No additional information available

12.6 Other adverse effects

No additional information available

13. Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed

collector's sorting instructions

Sewage disposal recommendations : Disposal must be done according to official regulations.

Product/Packaging disposal recommendations : Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as nonhazardous waste.

Additional information : Handle empty containers with care because residual vapours are flammable. Flammable vapours may accumulate in the container. Do not re-use empty containers.

14. Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

14.1. UN number

UN-No. (ADR)	: UN 2372
UN-No. (IMDG)	: UN 2372
UN-No. (IATA)	: UN 2372
UN-No. (ADN)	: UN 2372
UN-No. (RID)	: UN 2372

14.2. UN proper shipping name

Proper Shipping Name (ADR)	: 1,2-DI-(DIMETHYLAMINO) ETHANE
Proper Shipping Name (IMDG)	: 1,2-DI-(DIMETHYLAMINO) ETHANE
Proper Shipping Name (IATA)	: 1,2-Di-(dimethylamino) ethane
Proper Shipping Name (ADN)	: 1,2-DI-(DIMETHYLAMINO) ETHANE
Proper Shipping Name (RID)	: 1,2-DI-(DIMETHYLAMINO) ETHANE
Transport document description (ADR)	: UN 2372 1,2-DI-(DIMETHYLAMINO) ETHANE, 3, II, (D/E)
Transport document description(IMDG)	: UN 2372 1,2-DI(DIMETHYLAMINO)ETHANE, 3, II (21°C c.c.)
Transport document description (IATA)	: UN 2372 1,2-Di-(dimethylamino) ethane, 3, II
Transport document description (ADN)	: UN 2372 1,2-DI-(DIMETHYLAMINO) ETHANE, 3, II
Transport document description (RID)	: UN 2372 1,2-DI-(DIMETHYLAMINO) ETHANE, 3, II

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR)	: 3
Danger labels (ADR)	: 3

IMDG

Transport hazard class(es) (IMDG)	: 3
Danger labels (IMDG)	: 3

IATA

Transport hazard class(es) (IATA)	: 3
Danger labels (IATA)	: 3

ADN

Transport hazard class(es) (ADN)	: 3
Danger labels (ADN)	: 3

RID

Transport hazard class(es) (RID)	: 3
Danger labels (RID)	: 3

14.4. Packing group

Packing group (ADR)	: II
Packing group (IMDG)	: II
Packing group (IATA)	: II
Packing group (ADN)	: II
Packing group (RID)	: II

14.5. Environmental hazards

Dangerous for the environment	: No
Marine pollutant	: No
Other information	: No supplementary information available

14.6. Special precautions for user

Overland transport

Classification code (ADR)	: F1
Limited quantities (ADR	: 1l
Excepted quantities (ADR)	: E2
Packing instructions (ADR)	: P001, IBC02, R001
Mixed packing provisions (ADR)	: MP19
Portable tank and bulk container instructions (ADR)	: T4
Portable tank and bulk container special provisions (ADR)	: TP1
Tank code (ADR)	: LGBF
Vehicle for tank carriage	: FL
Transport category (ADR)	: 2
Special provisions for carriage - Operation (ADR)	: S2, S20
Hazard identification number (Kemler No.)	: 33

Tunnel restriction code (ADR)	: D/E
EAC code	: •2YE
Transport by sea	
Limited quantities (IMDG)	: 1 L
Excepted quantities (IMDG)	: E2
Packing instructions (IMGD)	: P001
IBC packing instructions (IMDG)	: IBC02
Tank instructions (IMDG)	: T4
Tank special provisions (IMDG)	: TP1
Stowage category (IMDG)	: B
Flash point (IMDG)	: 21°C c.c
MFAG-No	: 129
Air transport	
PCA Excepted quantities (IATA)	: E2
PCA Limited quantities (IATA)	: Y341
PCA limited quantity max net quantity (IATA)	: 1L
PCA packing instructions (IATA)	: 353
PCA max net quantity (IATA)	: 5L
CAO packing instructions (IATA)	: 364
CAO max net quantity (IATA)	: 60L
ERG code (IATA)	: 3L
Inland waterway transport	
Classification code (ADN)	: F1
Limited quantities (ADN	: 1 L
Excepted quantities (ADN)	: E2
Equipment required (ADN)	: PP, EX, A
Ventilation (ADN)	: VE01
Number of blue cones/lights (ADN)	: 1
Rail transport	
Classification code (RID)	: F1
Limited quantities (RID)	: 1L
Excepted quantities (RID)	: E2
Packing instructions (RID)	: P001, IBC02, R001
Mixed packing provisions (RID)	: MP19
Portable tank and bulk container instructions (RID)	: T4
Portable tank and bulk container special provisions (RID)	: TP1
Tank codes for RID tanks (RID)	: LGBF

Transport category (RID) : 2
Colis express (express parcels) (RID) : CE7
Hazard identification number (RID) : 33

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

15. Regulatory information

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

15.1.1 EU-Regulations

EU restriction list (REACH Annex XVII)

Reference code Applicable on	Reference code Applicable on
3(a)	N,N,N',N'-TETRAMETHYL ETHYLENEDIAMINE AR
3(b)	N,N,N',N'-TETRAMETHYL ETHYLENEDIAMINE AR
40	N,N,N',N'-TETRAMETHYL ETHYLENEDIAMINE AR

Not listed on REACH Annex XIV (Authorisation List)
Contains no substance(s) listed on the REACH Candidate List
Not listed on the PIC list (Regulation EU 649/2012)
Not listed on the POP list (Regulation EU 2019/1021)

Not listed on the Ozone Depletion list (Regulation EU 2024/590)

Contains no substance subject to the COUNCIL REGULATION (EC) for the control of dual-use items

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

Germany

Water hazard class (WGK) : WGK 1, Slightly hazardous to water (Classification according to AwSV; ID No. 2218).
Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed
SZW-lijst van mutagene stoffen : The substance is not listed
SZW-lijst van reprotoxische stoffen – Borstvoeding : The substance is not listed

SZW-lijst van reprotoxische stoffen – Vruchtbaarheid	: The substance is not listed
SZW-lijst van reprotoxische stoffen – Ontwikkeling	: The substance is not listed

Denmark

Danish National Regulations	: Young people below the age of 18 years are not allowed to use the product

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

16. Other information

Abbreviations and acronyms	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand
COD	Chemical oxygen demand
COD	Chemical oxygen demand
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level

NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties
Full text of H- and EUH-statements	
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Narcosis
H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
EUH066	Repeated exposure may cause skin dryness or cracking.

Safety Data Sheet (SDS), EU This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.