



MATERIAL SAFETY DATA SHEET

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SECTION 1: CHEMICAL IDENTIFICATION

Code: PR0616-25mL ; PR0616-50mL ; PR0616-100mL

Name: N,N,N',N'-Tetramethylethylene-Diamine (TEMED)

Synonyms: 1,2-bis-(dimethylamino)ethane; 1,2-di-(dimethylamino)ethane (DOT);
1,2-ethanediamine; N,N,N',N,-tetramethyl-(9Cl); Propamine D; TEMED;
TETRAMEEN; N,N,N',N,-tetramethyl-1,2-diaminoethane; N,N,N',N,-
tetramethylethanediamine; N,N,N',N,-tetramethyl-1,2-ethanediamine;
Tetramethyl ethylene diamine; N,N,N',N,-tetramethylethylenediamine;
TMEDA

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name: | CAS No.: | EC No.: | Weight% |
|------------------------------|----------|-----------|---------|
| 1,2-Bis(dimethylamino)ethane | 110-18-9 | 203-744-6 | 95-100 |

SECTION 3: HAZARDS IDENTIFICATION

GHS Classification

| | |
|-----------------------------|-------------|
| Flammable liquid- | Category 2 |
| Acute toxicity(oral)- | Category 4 |
| Acute toxicity(inhalation)- | Category 4 |
| Skin corrosion/irritation- | Category 1B |

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GHS labels elements, including precautionary statements



Signal word: Danger

Hazard statements

| | |
|------|---|
| H225 | Highly flammable liquid and vapour |
| H301 | Toxic if swallowed |
| H314 | Causes severe skin burns and eye damage |
| H331 | Toxic if inhaled |

Precautionary statements

| | |
|----------------|---|
| P210 | Stay away from heat/ sparks/ open flames/ hot surfaces. No smoking |
| P261 | Avoid breathing dust/ fume/ gas/ mist/ vapour/ spray |
| P280 | Wear protective gloves/protective clothing/ eye protection/ face protection |
| P305+P351+P338 | Rinse cautiously with water for several minutes if contact with eyes. Remove contact lenses, if present and easy to do, and continue rinsing. |
| P310 | Call a poison center immediately or attend to doctor/physician. |

SECTION 4: FIRST-AID MEASURES

In case of eye contact, wash copiously with water for at least 15 minutes. Consult a physician afterwards.

In case of skin contact, wash with soap and plenty running water and remove all contaminated clothing and shoes.

In case of inhalation, remove to fresh air. If not breathing give artificial respiration. Seek medical assistance if there are problems.

In case of ingestion, wash out mouth with water provided the person is conscious. Never give anything by mouth to an unconscious person. Drink plenty of water afterwards.

SECTION 5: FIRE FIGHTING MEASURES

Flammable liquid.

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Media which are not suitable for extinguishing purpose include vapour may travel considerable distance to source of ignition and flash back.

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

Hazardous decomposition products formed under fire conditions: Carbon oxides, nitrogen oxides

Flash point: 20°C / 68°F

Explosion data – sensitivity to mechanical impact: Not sensitive.

Explosion data – sensitivity to static discharge: Not sensitive.

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SECTION 6: ACCIDENTAL RELEASE MEASURES

For personal protection, use personal protective equipment. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation.

For environmental precautions, prevent further leakage or spillage if safe to do so for containment.

For cleaning up, cover with dry lime or soda ash. Only use non-sparking tools and equipment for removal of spill residue. Pick up and transfer to properly labeled containers. Wash spill site after material pick up is done and ventilate area.

SECTION 7: HANDLING AND STORAGE

Handle in accordance with good industrial hygiene and safety practice.

Keep containers tightly closed in a dry, cool and well-ventilated place.

Hygroscopic and protect from moisture.

Incompatible with acids, acid chlorides, anhydrides, strong oxidizing agents, carbon dioxide copper, and copper alloys.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory protection Where exposure limits are exceeded, wear respiratory protection. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Positive-pressure supplied air respirators may be required for high airborne contamination concentrations.

Eye protection Use safety glasses with side-shields.

Skin and body protection Impervious clothing. Wear protection gloves/clothing.

Use engineering measures such as showers, eyewash stations and ventilation systems.

Handle in accordance with good industrial hygiene and safety practice.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

| | |
|----------------------------|--------------------------|
| Appearance: | Clear |
| Physical state: | Liquid |
| Odor: | Amine-like |
| Odor threshold: | No information available |
| Density: | 4.0 |
| pH: | No data available |
| Freezing Point: | No information available |
| Melting Point: | -55°C |
| Initial Boiling Point: | No information available |
| Boiling Point: | 120-122°C |
| Flash Point: | 20°C / 68°F |
| Auto-ignition temperature: | No data available |
| Decomposition temperature: | No information available |

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| | |
|---|--------------------------|
| Upper flammability limits in air: | 9.08% |
| Lower flammability limits in air: | 0.98% |
| Explosive Properties: | No information available |
| Oxidizing properties: | No information available |
| Solubility: | No information available |
| Water solubility: | Soluble in water |
| Partition coefficient (n-octanol/water): | No data available |
| MMHG@37.8°C: | No data available |
| Vapour density: | No data available |
| Evaporation rate: | No data available |
| Specific gravity: | 0.770 |
| Viscosity: | No information available |

SECTION 10: STABILITY AND REACTIVITY

Stable under recommended storage conditions.

| | |
|-----------------------------------|--|
| Materials to avoid: | Acids, acid chlorides, anhydrides, strong oxidizing agents, carbon dioxide copper, copper alloys |
| Hazardous decomposition products: | Carbon oxides, nitrogen oxides |
| Hazardous polymerization: | Do not occur |
| Condition to avoid: | Hygroscopic and protect from moisture |

SECTION 11: TOXICOLOGICAL INFORMATION

Acute toxicity

This product is toxic when swallowed or inhaled. This product is corrosive to eye, skin and respiratory system.

| | |
|------------------|-----------------------|
| Oral LD50: | Rat – 268 mg/kg |
| Dermal LD50: | Rabbit – 5390 mg/kg |
| Inhalation LC50: | Rat – 1318 ppm – 4hrs |

Chronic toxicity

This product has no known chronic effect and none known target organ effects based on information supplied.

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

The environmental effect of this product has not been fully investigated.



SECTION 13: DISPOSAL CONSIDERATIONS

Dispose waste material in accordance with all federal, state and local environmental regulation.
Observe all federal, state and local environmental regulations.

SECTION 14: TRANSPORT INFORMATION

DOT (US)

UN no.: 2372 Class: 3 Packing group: II

Proper shipping name: 1,2-Di-(Dimethylamino)ethane

IATA

UN no.: 2372 Class: 3 Packing group: II

Proper shipping name: 1,2-Di-(Dimethylamino)ethane

SECTION 15: REGULATORY INFORMATION

International inventories

| | |
|---------------|---------------|
| TSCA | Complies |
| EINECS/ELINCS | Complies |
| ENCS | Complies |
| IECSC | Complies |
| KECL | Do not comply |
| PICCS | Complies |
| AICS | Complies |

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA).
This product contain a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulation, Part 372.

SARA 311/312 Hazards Categories

| | |
|-----------------------------------|-----|
| Acute Health Hazard | Yes |
| Chronic Health Hazard | No |
| Fire Hazard | Yes |
| Sudden Release of Pressure Hazard | No |
| Reactive Hazard | No |

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product contain the following substances which are regulated as hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act Amendments of 1990.

| | |
|----------------|------------------------------|
| Chemical name: | 1,2-Bis(dimethylamino)ethane |
| CAS No.: | 110-18-9 |
| Weight%: | 95-100 |
| VOC Chemicals: | Group V |

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U.S. State Regulations

California Prop. 65 Components

This product does not contain any Proposition 65 chemicals.

International Regulations

Mexico – Grade

No information available

WHMIS Hazard Class

B2 Flammable liquid

D2B Toxic materials

E Corrosive material



SECTION 16: OTHER INFORMATION

The information contained in this MSDS relates only to the material(s) designed and does not relate to use(s) in combination with any other material, process(es) and /or chemical reaction(s). Vivantis Technologies Sdn. Bhd. provides this information in good faith, from sources believed to be accurate; however, Vivantis assumes no liability for its accuracy or completeness, and thus shall not be held liable for any damage resulting from handling or from contact with the above product.

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