

## Chemical Safety Data Sheet MSDS / SDS

## N,N-dimethyl-4-nitrosoaniline SDS

Revision Date:2024-04-25 Revision Number:1

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****Product identifier**

Product name: N,N-dimethyl-4-nitrosoaniline

CAS: 138-89-6

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

Relevant identified uses: For R&amp;D use only. Not for medicinal, household or other use.

Uses advised against: none

**Company Identification**

Company: Chemicalbook.in

Address: 5 vasavi Layout Basaveswara Nilayam Pragathi Nagar Hyderabad, India -500090

Telephone: +91 9550333722

**SECTION 2: Hazards identification****Classification of the substance or mixture**Self- heating substances and mixtures, Category 1  
Acute toxicity - Category 3, Oral

Skin irritation, Category 2  
Skin sensitization, Category 1  
Eye irritation, Category 2  
Specific target organ toxicity - single exposure, Category 3

#### GHS label elements, including precautionary statements

Pictogram(s)



Signal word

Danger

#### Hazard statement(s)

H251 Self-heating; may catch fire  
H301 Toxic if swallowed  
H315 Causes skin irritation  
H317 May cause an allergic skin reaction  
H319 Causes serious eye irritation  
H335 May cause respiratory irritation

#### Precautionary statement(s)

#### Prevention

P235 Keep cool.  
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...  
P264 Wash ... thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P272 Contaminated work clothing should not be allowed out of the workplace.  
P271 Use only outdoors or in a well-ventilated area.

#### Response

P301+P316 IF SWALLOWED: Get emergency medical help immediately.  
P321 Specific treatment (see ... on this label).  
P330 Rinse mouth.  
P302+P352 IF ON SKIN: Wash with plenty of water/...  
P332+P317 If skin irritation occurs: Get medical help.  
P362+P364 Take off contaminated clothing and wash it before reuse.  
P333+P317 If skin irritation or rash occurs: Get medical help.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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

P319 Get medical help if you feel unwell.

### Storage

P407 Maintain air gap between stacks or pallets.

P410 Protect from sunlight.

P413 Store bulk masses greater than ... kg/...lbs at temperatures not exceeding ... °C/... °F.

P420 Store separately.

P405 Store locked up.

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

### Disposal

P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

### Other hazards which do not result in classification

no data available

## SECTION 3: Composition/information on ingredients

### Substance

Chemical name: N,N-dimethyl-4-nitrosoaniline

Common names and synonyms: N,N-dimethyl-4-nitrosoaniline

CAS number: 138-89-6

EC number: 205-343-1

Concentration: 100%

## SECTION 4: First aid measures

Description of necessary first-aid measures

**If inhaled**

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a doctor immediately. Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

**Following skin contact**

Take off contaminated clothing immediately. Wash off with soap and plenty of water. Consult a doctor.

**Following eye contact**

Rinse with pure water for at least 15 minutes. Consult a doctor.

**Following ingestion**

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

**Most important symptoms/effects, acute and delayed**

Excerpt from ERG Guide 135 [Substances - Spontaneously Combustible]: Fire will produce irritating, corrosive and/or toxic gases. Inhalation of decomposition products may cause severe injury or death. Contact with substance may cause severe burns to skin and eyes. Runoff from fire control may cause pollution. (ERG, 2016)

**Indication of immediate medical attention and special treatment needed, if necessary****Absorption, Distribution and Excretion**

Most aromatic amines are lipid-sol to variable extent & are readily absorbed through skin. aromatic amines

**SECTION 5: Firefighting measures****Suitable extinguishing media**

Excerpt from ERG Guide 135 [Substances - Spontaneously Combustible]: DO NOT USE WATER, CO2 OR FOAM ON MATERIAL ITSELF. Some of these materials may react violently with water. EXCEPTION: For Xanthates, UN3342 and for Dithionite (Hydrosulfite/Hydrosulphite) UN1384, UN1923 and UN1929, USE FLOODING AMOUNTS OF WATER for SMALL AND LARGE fires to stop the reaction. Smothering will not work for these materials, they do not need air to burn. SMALL FIRE: Dry chemical, soda ash, lime or DRY sand, EXCEPT for UN1384, UN1923, UN1929 and UN3342. LARGE FIRE: DRY sand, dry chemical, soda ash or lime EXCEPT for UN1384, UN1923, UN1929 and UN3342, or withdraw from area and let fire burn. CAUTION: UN3342 when flooded with water will continue to evolve flammable Carbon disulfide/Carbon disulphide vapors. Move containers from fire area if you can do it without risk. FIRE INVOLVING TANKS OR CAR/TRAILER LOADS: Fight fire from maximum distance or use unmanned hose holders or monitor

nozzles. Do not get water inside containers or in contact with substance. Cool containers with flooding quantities of water until well after fire is out. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. ALWAYS stay away from tanks engulfed in fire. (ERG, 2016)

### **Specific hazards arising from the chemical**

Excerpt from ERG Guide 135 [Substances - Spontaneously Combustible]: Flammable/combustible material. May ignite on contact with moist air or moisture. May burn rapidly with flare-burning effect. Some react vigorously or explosively on contact with water. Some may decompose explosively when heated or involved in a fire. May re-ignite after fire is extinguished. Runoff may create fire or explosion hazard. Containers may explode when heated. (ERG, 2016)

### **Special protective actions for fire-fighters**

Wear self-contained breathing apparatus for firefighting if necessary.

## **SECTION 6: Accidental release measures**

### **Personal precautions, protective equipment and emergency procedures**

Avoid dust formation. Avoid breathing mist, gas or vapours. Avoid contacting with skin and eye. Use personal protective equipment. Wear chemical impermeable gloves. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

### **Environmental precautions**

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

### **Methods and materials for containment and cleaning up**

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

## **SECTION 7: Handling and storage**

### **Precautions for safe handling**

Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust

and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

#### **Conditions for safe storage, including any incompatibilities**

Keep all flammables away from area where oxidizing agents are stored. storage area should be kept cool & ventilated, & should be fireproof.

### **SECTION 8: Exposure controls/personal protection**

#### **Control parameters**

#### **Occupational Exposure limit values**

no data available

#### **Biological limit values**

no data available

#### **Appropriate engineering controls**

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

#### **Individual protection measures, such as personal protective equipment (PPE)**

#### **Eye/face protection**

Wear tightly fitting safety goggles with side-shields conforming to EN 166(EU) or NIOSH (US).

#### **Skin protection**

Wear fire/flame resistant and impervious clothing. Handle with gloves. Gloves must be inspected prior to use. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

#### **Respiratory protection**

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

#### **Thermal hazards**

no data available

## SECTION 9: Physical and chemical properties and safety characteristics

Physical state:	P-nitrosodimethylaniline is a dark green crystalline solid. Insoluble in water. Harmful if ingested.
Colour:	GREEN PLATES OR LEAFLETS
Odour:	no data available
Melting point/freezing point:	180°C(lit.)
Boiling point or initial boiling point and boiling range:	122°C/1mmHg(lit.)
Flammability:	no data available
Lower and upper explosion limit/flammability limit:	no data available
Flash point:	233°C
Auto-ignition temperature:	no data available
Decomposition temperature:	no data available
pH:	no data available
Kinematic viscosity:	no data available
Solubility:	less than 0.1 mg/mL at 70° F (NTP, 1992)
Partition coefficient n-octanol/water:	no data available
Vapour pressure:	0.0135mmHg at 25°C

Density and/or relative density:	1.15
Relative vapour density:	no data available
Particle characteristics:	no data available

## SECTION 10: Stability and reactivity

### Reactivity

Susceptible to spontaneous combustion upon exposure to air. Insoluble in water.

### Chemical stability

no data available

### Possibility of hazardous reactions

MODERATE, WHEN EXPOSED TO HEAT OR FLAMEP-NITROSODIMETHYLANILINE has a delayed violent reaction with acetic anhydride. (NTP, 1992)

### Conditions to avoid

no data available

### Incompatible materials

Strong oxidizers

### Hazardous decomposition products

no data available

## SECTION 11: Toxicological information

### Acute toxicity



Oral: no data available

Inhalation: no data available

Dermal: no data available

**Skin corrosion/irritation**

no data available

**Serious eye damage/irritation**

no data available

**Respiratory or skin sensitization**

no data available

**Germ cell mutagenicity**

no data available

**Carcinogenicity**

IARC-2A, NIOSH-Ca, NTP-R, OSHA-Ca, TLV-A3, EPA-B2

**Reproductive toxicity**

no data available

**STOT-single exposure**

no data available

**STOT-repeated exposure**

no data available

**Aspiration hazard**

no data available

## SECTION 12: Ecological information

### Toxicity

Toxicity to fish: no data available

Toxicity to daphnia and other aquatic invertebrates: no data available

Toxicity to algae: no data available

Toxicity to microorganisms: no data available

### Persistence and degradability

no data available

### Bioaccumulative potential

no data available

### Mobility in soil

no data available

### Other adverse effects

no data available

## SECTION 13: Disposal considerations

### Disposal methods

#### Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

#### Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas

scrubbing is possible for combustible packaging materials.

## SECTION 14: Transport information

### UN Number

ADR/RID: UN1369 (For reference only, please check.)

IMDG: UN1369 (For reference only, please check.)

IATA: UN1369 (For reference only, please check.)

### UN Proper Shipping Name

ADR/RID: p-NITROSODIMETHYLANILINE (For reference only, please check.)

IMDG: p-NITROSODIMETHYLANILINE (For reference only, please check.)

IATA: p-NITROSODIMETHYLANILINE (For reference only, please check.)

### Transport hazard class(es)

ADR/RID: 4.2 (For reference only, please check.)

IMDG: 4.2 (For reference only, please check.)

IATA: 4.2 (For reference only, please check.)

### Packing group, if applicable

ADR/RID: II (For reference only, please check.)

IMDG: II (For reference only, please check.)

IATA: II (For reference only, please check.)

### Environmental hazards

ADR/RID: No

IMDG: No

IATA: No

### Special precautions for user

no data available

### Transport in bulk according to IMO instruments

no data available

### **SECTION 15: Regulatory information**

**Safety, health and environmental regulations specific for the product in question**

**European Inventory of Existing Commercial Chemical Substances (EINECS)**

Listed.

**EC Inventory**

Listed.

**United States Toxic Substances Control Act (TSCA) Inventory**

Listed.

**China Catalog of Hazardous chemicals 2015**

Listed.

**New Zealand Inventory of Chemicals (NZIoC)**

Listed.

**(PICCS)**

Listed.

**Vietnam National Chemical Inventory**

Not Listed.

**IECSC)**

Listed.

**Korea Existing Chemicals List (KECL)**

Not Listed.

### **SECTION 16: Other information**

## Abbreviations and acronyms

CAS: Chemical Abstracts Service

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

IMDG: International Maritime Dangerous Goods

IATA: International Air Transportation Association

TWA: Time Weighted Average

STEL: Short term exposure limit

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

EC50: Effective Concentration 50%

## References

IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>

HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>

IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>

eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website:  
[http://www.echemportal.org/echemportal/index?pageID=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en)

CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>

ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>

ERG - Emergency Response Guidebook by U.S. Department of Transportation, website:  
<http://www.phmsa.dot.gov/hazmat/library/erg>

Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>

ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

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