

MATERIAL SAFETY DATA SHEET

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Version 1.3

Section 1 - Product and Company Information

Product Name	N,N-DIMETHYL-4-NITROSOANILINE, 97%
Product Number	D172405
Brand	ALDRICH
Company	Sigma-Aldrich
Street Address	3050 Spruce Street
City, State, Zip, Country	SAINT LOUIS MO 63103 US
Technical Phone:	314 771 5765
Emergency Phone:	414 273 3850 Ext. 5996
Fax:	800 325 5052

Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313
4-NITROSO-N,N-DIMETHYLALANINE	138-89-6	No
Formula	C8H10N2O	
Synonyms	Accelerine * Benzenamine, N,N-dimethyl-4-nitroso-(9CI) * p-(Dimethylamino)nitrosobenzene * 4-(Dimethylamino)nitrosobenzene * N,N-Dimethyl-p-nitrosoaniline * N,N-Dimethyl-4-nitrosobenzenamine * Dimethyl(p-nitrosophenyl)amine * NCI-C01821 * NDMA * p-Nitroso-N,N-dimethylaniline * 4-Nitrosodimethylaniline * Paranitrosodimethylanilide * Ultra Brilliant Blue P	
RTECS Number:	BX7175000	

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Flammable (USA) Highly Flammable (EU). Toxic.
Toxic if swallowed. Irritating to eyes, respiratory system and skin. May cause sensitization by skin contact.
Readily absorbed through skin.

HMIS RATING

HEALTH: 3*
FLAMMABILITY: 2
REACTIVITY: 0

NFPA RATING

HEALTH: 3
FLAMMABILITY: 2
REACTIVITY: 0

*additional chronic hazards present.

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

ORAL EXPOSURE

If swallowed, wash out mouth with water provided person is conscious. Call a physician immediately.

INHALATION EXPOSURE

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

DERMAL EXPOSURE

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

EYE EXPOSURE

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5 - Fire Fighting Measures

FLAMMABLE HAZARDS

Flammable Hazards: Yes

EXPLOSION DATA

Dust Potential: This material, like most materials in powder form, is capable of creating a dust explosion.

FLASH POINT

N/A

AUTOIGNITION TEMP

N/A

FLAMMABILITY

N/A

EXTINGUISHING MEDIA

Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

FIREFIGHTING

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
Specific Hazard(s): Flammable solid. Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL

Evacuate area. Shut off all sources of ignition. Use nonsparking tools.

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP

Avoid raising dust. Sweep up, place in a bag and hold for waste disposal. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

HANDLING

User Exposure: Avoid breathing dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

STORAGE

Suitable: Keep container closed. Keep away from heat, sparks, and open flame.

Section 8 - Exposure Controls / PPE

ENGINEERING CONTROLS

Safety shower and eye bath. Use nonsparking tools. Use only in a chemical fume hood.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory: Government approved respirator.

Hand: Compatible chemical-resistant gloves.

Eye: Chemical safety goggles.

GENERAL HYGIENE MEASURES

Wash thoroughly after handling.

Section 9 - Physical/Chemical Properties

Appearance	Physical State: Solid	
Property	Value	At Temperature or Pressure
Molecular Weight	150.18 AMU	
pH	N/A	
BP/BP Range	N/A	
MP/MP Range	84 °C	
Freezing Point	N/A	
Vapor Pressure	N/A	
Vapor Density	N/A	
Saturated Vapor Conc.	N/A	
SG/Density	N/A	
Bulk Density	N/A	
Odor Threshold	N/A	
Volatile%	N/A	
VOC Content	N/A	
Water Content	N/A	
Solvent Content	N/A	
Evaporation Rate	N/A	
Viscosity	N/A	
Surface Tension	N/A	
Partition Coefficient	N/A	
Decomposition Temp.	N/A	
Flash Point	N/A	
Explosion Limits	N/A	
Flammability	N/A	
Autoignition Temp	N/A	
Refractive Index	N/A	
Optical Rotation	N/A	
Miscellaneous Data	N/A	
Solubility	Solvent: 50 mg/ml EtOH Clear	

N/A = not available

Section 10 - Stability and Reactivity

STABILITY

Stable: Stable.

Materials to Avoid: Strong oxidizing agents, Strong acids, Strong reducing agents, Acetic acid, Acetic anhydride.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide, Nitrogen oxides.

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

Section 11 - Toxicological Information

ROUTE OF EXPOSURE

Skin Contact: Causes skin irritation.

Skin Absorption: May be harmful if absorbed through the skin.
Readily absorbed through skin.

Eye Contact: Causes eye irritation.

Inhalation: May be harmful if inhaled. Material is irritating to mucous membranes and upper respiratory tract.

Ingestion: Toxic if swallowed.

SENSITIZATION

Skin: May cause allergic skin reaction.

SIGNS AND SYMPTOMS OF EXPOSURE

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

TOXICITY DATA

Oral

Rat

65 mg/kg

LD50

CHRONIC EXPOSURE - CARCINOGEN

Species: Rat

Route of Application: Oral

Dose: 7300 MG/KG

Exposure Time: 1Y

Frequency: C

Result: Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Gastrointestinal: Tumors. Blood: Lymphomas including Hodgkin's disease.

Section 12 - Ecological Information

Section 13 - Disposal Considerations

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

Contact a licensed professional waste disposal service to dispose of this material. Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT

Proper Shipping Name: p-Nitrosodimethylaniline
UN#: 1369
Class: 4.2
Packing Group: Packing Group II
Hazard Label: Spontaneously combustible
PIH: Not PIH

IATA

Proper Shipping Name: p-Nitrosodimethylaniline
IATA UN Number: 1369
Hazard Class: 4.2
Packing Group: II

Section 15 - Regulatory Information

EU ADDITIONAL CLASSIFICATION

Symbol of Danger: F T
Indication of Danger: Highly Flammable. Toxic.
R: 11 25 36/37/38 43
Risk Statements: Highly flammable. Toxic if swallowed.
Irritating to eyes, respiratory system and skin. May cause sensitization by skin contact.
S: 16 26 36/37 45
Safety Statements: Keep away from sources of ignition - no smoking. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing and gloves. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

US CLASSIFICATION AND LABEL TEXT

Indication of Danger: Flammable (USA) Highly Flammable (EU). Toxic.
Risk Statements: Toxic if swallowed. Irritating to eyes, respiratory system and skin. May cause sensitization by skin contact.
Safety Statements: Keep away from sources of ignition - no smoking. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing and gloves. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
US Statements: Readily absorbed through skin.

UNITED STATES REGULATORY INFORMATION

SARA LISTED: No
TSCA INVENTORY ITEM: Yes

CANADA REGULATORY INFORMATION

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.
DSL: Yes
NDSL: No

Section 16 - Other Information

DISCLAIMER

For R&D use only. Not for drug, household or other uses.

WARRANTY

The above information 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. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2004 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.