

SAFETY DATA SHEET

Preparation Date: 10/03/2019

Revision date 10/03/2019

Revision Number: G1

1. IDENTIFICATION

Product identifier

Product code: D2955
Product Name: N,N-DIMETHYL-P-PHENYLENEDIAMINE, FREE BASE

Other means of identification

Synonyms: 4-Dimethylaminoaniline
 p-Phenylenediamine, N,N-dimethyl-
 p-Aminodimethylaniline
 p-Amino-N,N-dimethylaniline
 p-(Dimethylamino)aniline; 4-(Dimethylamino)aniline
 4-(Dimethylamino)benzenamine
 p-Dimethylaminophenylamine
 4-(Dimethylamino)phenylamine
 Dimethyl-para-phenylenediamine
 N,N-Dimethyl-1,4-phenylenediamine
 Dimethyl-p-phenylenediamine
 DMPD
CAS #: 99-98-9
RTECS # ST0874000
CI#: 76075

Recommended use of the chemical and restrictions on use

Recommended use: Photographic processing. Research and Development. Manufacture of substances. Laboratory chemicals.

Uses advised against No information available

Supplier: Spectrum Chemical Mfg. Corp
 14422 South San Pedro St.
 Gardena, CA 90248
 (310) 516-8000

Order Online At: <https://www.spectrumchemical.com>

Emergency telephone number Chemtrec 1-800-424-9300

Contact Person: Tom Tyner (USA - West Coast)

Contact Person: Ibad Tirmiz (USA - East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Acute toxicity - Oral	Category 2
Acute toxicity - Dermal	Category 3

Acute toxicity - Inhalation (Gases)	Category 3
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Skin sensitization	Category 1

Label elements

Danger

Hazard statements
 Toxic in contact with skin or if inhaled
 Fatal if swallowed
 Causes skin irritation
 Causes serious eye irritation
 May cause an allergic skin reaction



Hazards not otherwise classified (HNOC)

Not Applicable

Other hazards

Not available

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Wear protective gloves/protective clothing/eye protection/face protection
 Avoid breathing dust
 Use only outdoors or in a well-ventilated area
 Contaminated work clothing must not be allowed out of the workplace

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
 IF ON SKIN: Wash with plenty of water
 Call a POISON CENTER or physician if you feel unwell
 Take off immediately all contaminated clothing
 Wash contaminated clothing before reuse
 If skin irritation or rash occurs: Get medical attention
 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician.
 IF SWALLOWED: Immediately call a POISON CENTER or physician
 Rinse mouth

Precautionary Statements - Storage

Store locked up

Product code: D2955

Product name:
 N,N-DIMETHYL-P-PHENYLENEDIAMI
 NE, FREE BASE

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

Precautionary Statements - Disposal

Dispose of contents and container to an approved waste disposal plant in accordance with local, regional, national and international regulations as applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No	Weight-%
N,N-Dimethyl-p-phenylenediamine, Free Base	99-98-9	100

4. FIRST AID MEASURES

First aid measures

- General Advice:** National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222. First aider needs to protect himself. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.
- Skin Contact:** Toxic in contact with skin. Wash off immediately with soap and plenty of water. Remove all contaminated clothes and shoes. Continue flushing with plenty of water for at least 15 minutes. Immediate medical attention is required. Call a physician or poison control center immediately.
- Eye Contact:** Flush eyes with water for 15 minutes. Get medical attention. If symptoms persist, call a physician.
- Inhalation:** Toxic by inhalation. Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. **WARNING!** It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious or corrosive. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.
- Ingestion:** Fatal if swallowed. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Immediate medical attention is required.

Most important symptoms and effects, both acute and delayed

- Symptoms**
- Causes serious eye irritation
 - Causes skin irritation
 - May cause sensitization by skin contact
 - Convulsions
 - May cause cyanosis

Indication of any immediate medical attention and special treatment needed

- Notes to Physician:** Treat symptomatically.

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Product code: D2955

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Suitable Extinguishing Media: Dry chemical. Carbon dioxide (CO₂). Water spray mist, or foam.

Unsuitable Extinguishing Media: No information available.

Specific hazards arising from the chemical

Hazardous combustion products Carbon monoxide. Carbon dioxide (CO₂). Nitrogen oxides (NO_x).

Specific hazards May be combustible at high temperatures.

Special Protective Actions for Firefighters

Specific Methods: No information available

Special Protective Equipment for Firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions: Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid contact with skin, eyes and clothing. Use personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid dust formation. Remove all sources of ignition.

Environmental precautions Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Cover with plastic sheet to prevent spreading.

Methods for cleaning up Sweep up and shovel into suitable containers for disposal. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:

Provide sufficient air exchange and/or exhaust in work rooms. Avoid dust formation. Keep away from incompatible materials.

Safe Handling Advice:

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not ingest. Do not breathe dust. Keep away from heat and sources of ignition. Use only in well-ventilated areas. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:

Product code: D2955

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Sensitive to light. Store in light-resistant containers. Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials.

Incompatible Materials:

- Oxidizing agents
- Acid chlorides
- Acid anhydrides

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

Component	CAS No	OSHA	NIOSH	ACGIH	AIHA WEEL
N,N-Dimethyl-p-phenylenediamine, Free Base	99-98-9	None	None	None	None

Canada

Component	CAS No	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec
N,N-Dimethyl-p-phenylenediamine, Free Base	99-98-9	None	None	None	None

Australia and Mexico

Component	CAS No	Australia	Mexico
N,N-Dimethyl-p-phenylenediamine, Free Base	99-98-9	None	None

Appropriate engineering controls

Engineering measures to reduce exposure:

Ensure adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

- Eye protection:** Goggles or Safety glasses with side-shields.
- Skin and body protection:** Chemical resistant apron
Gloves
Long sleeved clothing
- Respiratory protection:** Wear respirator with dust filter. Be sure to use an approved/certified respirator or equivalent.
- Hygiene measures:** Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Solid	Appearance: Crystalline powder.	Color: White. Pale Yellow Red. Brownish-black.
Odor: No information available.	Taste No information available.	Formula C8H12N2
Molecular/Formula weight (g/mole): 136.20	Flammability (solid, gas) no data available	Flashpoint (°C/°F): 130°C/266°F
Flash Point Tested according to: Closed cup	Autoignition Temperature (°C/°F): 539°C/1002°F	Lower Explosion Limit (%): No information available
Upper Explosion Limit (%): No information available	Melting point/range(°C/°F): 34-36°C/93-97°F	Decomposition temperature(°C/°F): No information available
Boiling point/range(°C/°F): 262°C/504°F	Bulk density: No information available	Density (g/cm3): 1.09
Specific gravity: No information available	pH No information available	Vapor pressure @ 20°C (kPa): No information available
Evaporation rate: No information available	Vapor density: No information available	VOC content (g/L): No information available
Odor threshold (ppm): No information available	Partition coefficient (n-octanol/water): No information available	Viscosity: No information available
Miscibility: No information available	Solubility: Very slightly soluble in water Very soluble in alcohol Very soluble in Benzene Soluble in Ether Soluble in Acetone Soluble in Chloroform	

10. STABILITY AND REACTIVITY

Reactivity

No information available

Chemical stability

Stability: Sensitive to light. Stable under recommended storage conditions.

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid: Heat. Exposure to light. Ignition sources. Incompatible materials.

Incompatible Materials: Oxidizing agents
Acid chlorides
Acid anhydrides

Hazardous decomposition products: Nitrogen oxides (NOx). Carbon oxides.

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Other Information

Corrosivity: No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:
Ingestion. Inhalation. Skin. Eyes.

Acute Toxicity

The following values are calculated based on chapter 3.1 of the GHS document
Component Information

N,N-Dimethyl-p-phenylenediamine, Free Base	
CAS No	99-98-9

LD50/oral/rat = 50 mg/kg Oral LD50 Rat
LD50/oral/mouse = 30 mg/kg oral LD50 mouse
LD50/dermal/rabbit = No information available
LD50/dermal/rat = No information available
LC50/inhalation/rat = No information available
LC50/inhalation/mouse = No information available
Other LD50 or LC50 information = 500 uL/kg dermal LD50 guinea pig
150 mg/kg oral LD50 rabbit

Product Information

LD50/oral/rat =
Value - Acute Toxicity = 50 mg/kg

LD50/oral/mouse =
Value - Acute Tox = 30 mg/kg

LD50/dermal/rabbit
Value - Acute Toxicity = No information available

LD50/dermal/rat
VALUE - Acute Tox = No information available

LC50/inhalation/rat
VALUE-Vapor = No information available
VALUE-Gas = No information available
VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse
VALUE-Vapor = No information available
VALUE - Gas = No information available
VALUE - Dust/Mist = No information available

Symptoms

Skin Contact: Causes skin irritation. May cause allergic skin reaction.

Eye Contact: Causes serious eye irritation. Redness and pain.

Inhalation May cause respiratory tract irritation. It may affect behavior/central nervous system (convulsions/seizures). Can cause dyspnea (shortness of breath and difficulty breathing).

Ingestion May cause digestive (gastrointestinal) tract irritation.

Aspiration hazard No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity No information available.

Sensitization: May cause sensitization by skin contact.

Mutagenic Effects: No information available

Carcinogenic effects: Not considered carcinogenic.

Component	CAS No	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
N,N-Dimethyl-p-phenylenediamine, Free Base	99-98-9	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

ACGIH (American Conference of Governmental Industrial Hygienists)

IARC (International Agency for Research on Cancer)

NTP (National Toxicology Program)

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

Reproductive toxicity No data is available

Reproductive Effects: No information available

Developmental Effects: No information available

Teratogenic Effects: No information available

Specific Target Organ Toxicity

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Target Organs: No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: No data available.

Persistence and degradability: No information available

Bioaccumulative potential: No information available.

Mobility in soil No information available

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:

Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:

Empty containers should be taken for local recycling, recovery or waste disposal. Dispose of as unused product.

Component	CAS No	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
N,N-Dimethyl-p-phenylenediamine, Free Base	99-98-9	None	None	None	None

14. TRANSPORT INFORMATION

DOT

UN-No: UN2811
Proper Shipping Name: Toxic solids, organic, n.o.s.
Hazard Class 6.1
Subsidiary Class No information available
Packing group: II
Emergency Response Guide Number 154
Marine Pollutant No data available
DOT RQ (lbs): No information available
Special Provisions IB8, IP2, IP4, T3, TP33
Symbol(s): [DOT]: (G) - Identifies proper shipping names for which one or more technical names of the hazardous material must be entered in parentheses, in association with the basic description.
Description: UN2811, Toxic solids, organic, n.o.s. (N,N-Dimethyl-p-phenylenediamine, Free Base), 6.1, II

TDG (Canada)

UN-No: UN2811
Proper Shipping Name: Toxic solid, organic, n.o.s.
Hazard Class 6.1
Subsidiary Risk: No information available
Packing Group: II
Marine Pollutant No Information available
Description: UN2811, Toxic solid, organic, n.o.s. (N,N-Dimethyl-p-phenylenediamine, Free Base), 6.1, II

ADR

UN Number UN2811
Proper Shipping Name: Toxic solid, organic, n.o.s.
Transport hazard class(es) 6.1
Packing group II

Subsidiary Risk: No information available
Special Provisions 274, 614
Description: UN2811, Toxic solid, organic, n.o.s. (N,N-Dimethyl-p-phenylenediamine, Free Base), 6.1, II

IMDG

UN-No: UN2811
Proper Shipping Name: Toxic solids, organic, n.o.s.
Hazard Class: 6.1
Subsidiary Risk: No information available
Packing Group: II
Marine Pollutant No information available
EMS: F-A
Special Provisions 274
Description UN2811, Toxic solid, organic, n.o.s. (N,N-Dimethyl-p-phenylenediamine, Free Base), 6.1, II

RID

UN Number UN2811
Proper Shipping Name: Toxic solid, organic, n.o.s.
Transport hazard class(es) 6.1
Subsidiary Risk: No information available
Packing group II
Special Provisions 274, 614
Description: UN2811, Toxic solid, organic, n.o.s. (N,N-Dimethyl-p-phenylenediamine, Free Base), 6.1, II

ICAO (air)

UN-No: UN2811
Proper Shipping Name: Toxic solid, organic, n.o.s.
Hazard Class 6.1
Subsidiary Risk: No information available
Packing Group: II
Description: UN2811, Toxic solid, organic, n.o.s. (N,N-Dimethyl-p-phenylenediamine, Free Base), 6.1, II
Special Provisions A3, A5

IATA

UN Number UN2811
Proper Shipping Name: Toxic solid, organic, n.o.s.
Transport hazard class(es) 6.1
Subsidiary Risk: No information available
Packing group II
Precautionary Statements - Response 6L
Special Provisions No information available
Description: UN2811, Toxic solid, organic, n.o.s. (N,N-Dimethyl-p-phenylenediamine, Free Base), 6.1, II

15. REGULATORY INFORMATION

International Inventories

Component	CAS No	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	China IECSC	Australia (AICS)	EINECS-No.
<i>N,N-Dimethyl-p-phenylenediamine, Free</i>	99-98-9	PresentACTIVE	Present KE-11209	Present	Present (3)-243	Present	Present	Present 202-807-5

Base								
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U.S. Regulations

N,N-Dimethyl-*p*-phenylenediamine, Free Base

Massachusetts RTK: Present

New Jersey RTK Hazardous Substance List: 2348

New Jersey (EHS) List: 2348 10 lb TPQ

New Jersey - Discharge Prevention - List of Hazardous Substances: Present

Pennsylvania RTK: Environmental hazard

Pennsylvania RTK - Environmental Hazard List Present

New York Release Reporting - List of Hazardous Substances:
1 lb RQ

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Component	CAS No	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
<i>N,N</i> -Dimethyl- <i>p</i> -phenylenediamine, Free Base	99-98-9	Not Listed	Not Listed	Not Listed	Not Listed

CERCLA/SARA

Component	CAS No	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting de minimis
<i>N,N</i> -Dimethyl- <i>p</i> -phenylenediamine, Free Base	99-98-9	None	10 lb EPCRA RQ	None	None	None

U.S. TSCA

Component	CAS No	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
<i>N,N</i> -Dimethyl- <i>p</i> -phenylenediamine, Free Base	99-98-9	Not Applicable	Not Applicable

Canada

WHMIS 2015 - GHS Classifications

WHMIS 2015 Hazard Classification Information:

The WHMIS 2015 classification of this product has not been validated or reviewed yet.

Canada Hazardous Products Regulation This product has not been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

DSL/NDSL

Component	CAS No	Canada (DSL)	Canada (NDSL)
N,N-Dimethyl-p-phenylenediamine, Free Base	99-98-9	Present	Not Listed

Component	CAS No	CEPA Schedule I - Toxic Substances
N,N-Dimethyl-p-phenylenediamine, Free Base	99-98-9	Not listed
Component	CAS No	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
N,N-Dimethyl-p-phenylenediamine, Free Base	99-98-9	Not listed

EU Classification**EU GHS - SV - CLP 1272/2008**

Component	CAS No	EU GHS - SV - CLP (1272/2008)
N,N-Dimethyl-p-phenylenediamine, Free Base	99-98-9	Acute toxicity - Oral - Acute Tox. 3: H301 Toxic if swallowed. (Minimum classification); Acute toxicity - Dermal - Acute Tox. 3: H311 Toxic in contact with skin. (Minimum classification); Acute toxicity - Inhalation - Acute Tox. 3: H331 Toxic if inhaled. (Minimum classification)612-031-00-2

EU - CLP (1272/2008)**R-phrase(s)**

R28 - Very toxic if swallowed
R36 - Irritating to eyes
R38 - Irritating to skin
R43 - May cause sensitization by skin contact
R23/24 - Toxic by inhalation and in contact with skin

S -phrase(s)

S 7 - Keep container tightly closed.
S36 - Wear suitable protective clothing
S28 - After contact with skin, wash immediately with plenty of water
S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)
S38 - In case of insufficient ventilation, wear suitable respiratory equipment
S 1/2 - Keep locked up and out of the reach of children.

Component	CAS No	Classification	Concentration Limits:	Safety Phrases
N,N-Dimethyl-p-phenylenediamine, Free Base	99-98-9	T; R23/24/25	No information	

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:

T - Toxic
Xi - Irritant

T



16. OTHER INFORMATION

Preparation Date: 10/03/2019
Revision date 10/03/2019
Prepared by: Sonia Owen

Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet