1. PRODUCT AND COMPANY IDENTIFICATION

Product name: N,N-Dimethyl-p-phenylenediamine
Product Number: 07750
Brand: Fluka
Supplier: Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO  63103
USA
Telephone: +1 800-325-5832
Fax: +1 800-325-5052
Emergency Phone #: (314) 776-6555
Preparation Information: Sigma-Aldrich Corporation
Product Safety - Americas Region
1-800-521-8956

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards
Toxic by inhalation., Highly toxic by ingestion, Toxic by skin absorption

GHS Classification
Acute toxicity, Oral (Category 2)
Acute toxicity, Inhalation (Category 3)
Acute toxicity, Dermal (Category 3)

GHS Label elements, including precautionary statements

Pictogram

Signal word Danger

Hazard statement(s)
H300 Fatal if swallowed.
H311 + H331 Toxic in contact with skin or if inhaled

Precautionary statement(s)
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash hands thoroughly after handling.
P280 Wear protective gloves/ protective clothing.
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
P311 Call a POISON CENTER or doctor/ physician.

HMIS Classification
Health hazard: 3
Flammability: 0
Physical hazard: 0

NFPA Rating
Health hazard: 3
Fire: 2
Reactivity Hazard: 0
Health hazard: 3
Fire: 2
Reactivity Hazard: 0

Potential Health Effects
- **Inhalation**: Toxic if inhaled. May cause respiratory tract irritation.
- **Skin**: Toxic if absorbed through skin. May cause skin irritation.
- **Eyes**: May cause eye irritation.
- **Ingestion**: May be fatal if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

**Synonyms**
- 4-Amino-N,N-dimethylaniline
- 4-(Dimethylamino)aniline
- DMPPDA

**Formula**
- $C_8H_{12}N_2$

**Molecular Weight**: 136.19 g/mol

<table>
<thead>
<tr>
<th>Component</th>
<th>Concentration</th>
</tr>
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<td>4-Amino-N,N-dimethylaniline</td>
<td></td>
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<td>EC-No.</td>
<td>202-807-5</td>
</tr>
<tr>
<td>Index-No.</td>
<td>612-031-00-2</td>
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</tbody>
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4. FIRST AID MEASURES

**General advice**
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**If inhaled**
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact**
Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

**In case of eye contact**
Flush eyes with water as a precaution.

**If swallowed**
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIREFIGHTING MEASURES

**Conditions of flammability**
Not flammable or combustible.

**Suitable extinguishing media**
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Special protective equipment for firefighters**
Wear self contained breathing apparatus for fire fighting if necessary.

**Hazardous combustion products**
Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx)

6. ACCIDENTAL RELEASE MEASURES

**Personal precautions**
Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

**Environmental precautions**
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
**Methods and materials for containment and cleaning up**
Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

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**7. HANDLING AND STORAGE**

**Precautions for safe handling**  
Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

**Conditions for safe storage**  
Keep container tightly closed in a dry and well-ventilated place.

Recommended storage temperature: 2 - 8 °C

Light sensitive. Store under inert gas. Air sensitive.

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**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Contains no substances with occupational exposure limit values.

**Personal protective equipment**

**Respiratory protection**  
Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Hand protection**  
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove’s outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**Immersion protection**  
Material: Nitrile rubber  
Minimum layer thickness: 0.11 mm  
Break through time: > 480 min  
Material tested:Dermatril® (Aldrich Z677272, Size M)

**Splash protection**  
Material: Nitrile rubber  
Minimum layer thickness: 0.11 mm  
Break through time: > 30 min  
Material tested:Dermatril® (Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 873000, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an Industrial Hygienist familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

**Eye protection**  
Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin and body protection**  
Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Hygiene measures**  
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.
9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance
- Form: solid
- Colour: no data available

Safety data
- pH: no data available
- Melting point/freezing point: Melting point/range: 34 - 36 °C (93 - 97 °F)
  Melting point/range: 36 - 38 °C (97 - 100 °F)
- Boiling point: 262 °C (504 °F)
- Flash point: 91 °C (196 °F) - closed cup
- Ignition temperature: no data available
- Autoignition temperature: no data available
- Lower explosion limit: no data available
- Upper explosion limit: no data available
- Vapour pressure: no data available
- Density: no data available
- Water solubility: no data available
- Partition coefficient: n-octanol/water: no data available
- Relative vapour density: no data available
- Odour: no data available
- Odour Threshold: no data available
- Evaporation rate: no data available

10. STABILITY AND REACTIVITY

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
no data available

Conditions to avoid
no data available

Materials to avoid
Acid chlorides, Acid anhydrides

Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx)
Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral LD50
LD50 Oral - mouse - 30 mg/kg

Inhalation LC50
Dermal LD50
LD50 Dermal - guinea pig - 0.5 mg/kg

Other information on acute toxicity
LD50 Intraperitoneal - rabbit - 100 mg/kg
LD50 Intraperitoneal - rat - 21 mg/kg
LD50 Intraperitoneal - mouse - 25 mg/kg
LD50 Intraperitoneal - guinea pig - 45 mg/kg

Skin corrosion/irritation
no data available

Serious eye damage/eye irritation
no data available

Respiratory or skin sensitization
Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

Germ cell mutagenicity
Genotoxicity in vitro - rat - Liver
 Unscheduled DNA synthesis
Genotoxicity in vitro - Hamster - Lungs
 Cytogenetic analysis
Genotoxicity in vitro - Ames test - S. typhimurium

Carcinogenicity
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity
no data available

Teratogenicity
no data available

Specific target organ toxicity - single exposure (Globally Harmonized System)
no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)
no data available

Aspiration hazard
no data available

Potential health effects
Inhalation: Toxic if inhaled. May cause respiratory tract irritation.
Ingestion
May be fatal if swallowed.

Skin
Toxic if absorbed through skin. May cause skin irritation.

Eyes
May cause eye irritation.

Signs and Symptoms of Exposure
Absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer. May cause convulsions. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Synergistic effects
no data available

Additional Information
RTECS: ST0874000

12. ECOLOGICAL INFORMATION

Toxicity
no data available

Persistence and degradability
no data available

Bioaccumulative potential
no data available

Mobility in soil

PBT and vPvB assessment
no data available

Other adverse effects
no data available

13. DISPOSAL CONSIDERATIONS

Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN number: 2811 Class: 6.1 Packing group: II
Proper shipping name: Toxic solids, organic, n.o.s. (4-Amino-N,N-dimethylaniline)
Reportable Quantity (RQ):
Marine pollutant: No
Poison Inhalation Hazard: No

IMDG
UN number: 2811 Class: 6.1 Packing group: II EMS-No: F-A, S-A
Proper shipping name: TOXIC SOLID, ORGANIC, N.O.S. (4-Amino-N,N-dimethylaniline)
Marine pollutant: No

IATA
UN number: 2811 Class: 6.1 Packing group: II
Proper shipping name: Toxic solid, organic, n.o.s. (4-Amino-N,N-dimethylaniline)

15. REGULATORY INFORMATION

OSHA Hazards
Toxic by inhalation., Highly toxic by ingestion, Toxic by skin absorption
SARA 302 Components
The following components are subject to reporting levels established by SARA Title III, Section 302:

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SARA 313 Components
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards
Acute Health Hazard

Massachusetts Right To Know Components

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Pennsylvania Right To Know Components

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New Jersey Right To Know Components

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California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Further information
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