

1 Identification

Product identifier

Product name: N,N-Dimethylaniline

Stock number: A11916

CAS Number:

121-69-7

EC number:

204-493-5

Index number:

612-016-00-0

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

Identified use: SU24 Scientific research and development

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Alfa Aesar
Thermo Fisher Scientific Chemicals, Inc.
30 Bond Street
Ward Hill, MA 01835-8099
Tel: 800-343-0660
Fax: 800-322-4757
Email: tech@alfa.com
www.alfa.com

Information Department: Health, Safety and Environmental Department

Emergency telephone number:

During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660. After normal business hours, call Carechem 24 at (866) 928-0789.

2 Hazard(s) identification

Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)



GHS06 Skull and crossbones

Acute Tox. 3 H301 Toxic if swallowed.

Acute Tox. 3 H311 Toxic in contact with skin.

Acute Tox. 3 H331 Toxic if inhaled.



GHS08 Health hazard

Carc. 2 H351 Suspected of causing cancer.

Flam. Liq. 4 H227 Combustible liquid.

Hazards not otherwise classified No information known.

Label elements

GHS label elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)

Hazard pictograms



GHS06 GHS08

Signal word

Danger

Hazard statements

H227 Combustible liquid.

H301+H311+H331 Toxic if swallowed, in contact with skin or if inhaled.

H351 Suspected of causing cancer.

Precautionary statements

P210 Keep away from flames and hot surfaces. No smoking.

P201 Obtain special instructions before use.

P261 Avoid breathing dust/fume/gas/mist/vapors/spray

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

WHMIS classification

B3 - Combustible liquid

D1A - Very toxic material causing immediate and serious toxic effects

D2B - Toxic material causing other toxic effects



Classification system

HMIS ratings (scale 0-4)

(Hazardous Materials Identification System)

HEALTH 3 Health (acute effects) = 3

FIRE 2 Flammability = 2

REACTIVITY 1 Physical Hazard = 1

Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

Product name: **N,N-Dimethylaniline**

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3 Composition/information on ingredients

Chemical characterization: Substances

CAS# Description:

121-69-7 N,N-Dimethylaniline

Concentration: ≤100%

Identification number(s):

EC number: 204-493-5

Index number: 612-016-00-0

4 First-aid measures

Description of first aid measures

General information

Immediately remove any clothing soiled by the product.

Remove breathing apparatus only after contaminated clothing has been completely removed.

In case of irregular breathing or respiratory arrest provide artificial respiration.

After inhalation

Supply fresh air. If required, provide artificial respiration. Keep patient warm.

Seek immediate medical advice.

After skin contact

Immediately wash with water and soap and rinse thoroughly.

Seek immediate medical advice.

After eye contact Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing Do not induce vomiting; immediately call for medical help.

Information for doctor

Most important symptoms and effects, both acute and delayed

Toxic in contact with skin.

Toxic if inhaled.

Toxic if swallowed.

Suspected of causing cancer.

Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

Extinguishing media

Suitable extinguishing agents Carbon dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Special hazards arising from the substance or mixture

If this product is involved in a fire, the following can be released:

Carbon monoxide and carbon dioxide

Nitrogen oxides (NOx)

Advice for firefighters

Protective equipment:

Wear self-contained respirator.

Wear fully protective impervious suit.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Environmental precautions: Do not allow product to reach sewage system or any water course.

Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose of contaminated material as waste according to section 13.

Ensure adequate ventilation.

Prevention of secondary hazards: Keep away from ignition sources.

Reference to other sections

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

Protective Action Criteria for Chemicals

PAC-1: 10 ppm

PAC-2: 330 ppm

PAC-3: 2,000 ppm

7 Handling and storage

Handling

Precautions for safe handling

Keep container tightly sealed.

Store in cool, dry place in tightly closed containers.

Ensure good ventilation at the workplace.

Open and handle container with care.

Information about protection against explosions and fires: Keep ignition sources away.

Conditions for safe storage, including any incompatibilities

Storage

Requirements to be met by storerooms and receptacles: No special requirements.

Information about storage in one common storage facility:

Do not store together with acids.

Store away from oxidizing agents.

Store away from halogens.

Store away from acid chlorides.

Store away from acid anhydrides.

Store away from chloroformates.

Further information about storage conditions:

Keep container tightly sealed.

Store in cool, dry conditions in well sealed containers.

Specific end use(s) No further relevant information available.

USA
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Product name: **N,N-Dimethylaniline**

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8 Exposure controls/personal protection

Additional information about design of technical systems:

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Control parameters

Components with limit values that require monitoring at the workplace:

121-69-7 N,N-Dimethylaniline (100.0%)

PEL (USA)	Long-term value: 25 mg/m ³ , 5 ppm Skin
REL (USA)	Short-term value: 50 mg/m ³ , 10 ppm Long-term value: 25 mg/m ³ , 5 ppm Skin
TLV (USA)	Short-term value: 50 mg/m ³ , 10 ppm Long-term value: 25 mg/m ³ , 5 ppm Skin; BEI-M
EL (Canada)	Short-term value: 10 ppm Long-term value: 5 ppm Skin
EV (Canada)	Short-term value: 50 mg/m ³ , 10 ppm Long-term value: 25 mg/m ³ , 5 ppm Skin

Ingredients with biological limit values:

121-69-7 N,N-Dimethylaniline (100.0%)

BEI (USA)	1.5 % of hemoglobin Medium: blood Time: during or end of shift Parameter: Methemoglobin (background, nonspecific, semi-quantitative)
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Additional information: No data

Exposure controls

Personal protective equipment

General protective and hygienic measures

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes and skin.

Maintain an ergonomically appropriate working environment.

Breathing equipment: Use self-contained respiratory protective device in emergency situations.

Recommended filter device for short term use:

Use a respirator with multi-purpose combination (US) or type ABEK (EN 14387) as a backup to engineering controls. Risk assessment should be performed to determine if air-purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards such as NIOSH (USA) or CEN (EU).

Protection of hands:

Impervious gloves

Check protective gloves prior to each use for their proper condition.

The selection of suitable gloves not only depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer.

Material of gloves Butyl rubber, BR

Penetration time of glove material (in minutes) 480

Glove thickness: 0.3 mm

Eye protection: Safety glasses with side shields / NIOSH (US) or EN 166(EU)

Body protection: Protective work clothing.

9 Physical and chemical properties

Information on basic physical and chemical properties

General Information

Appearance:

Form:	Liquid
Odor:	Fish-like
Odor threshold:	Not determined.

pH-value:	Not determined.
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Change in condition

Melting point/Melting range:	2 °C (36 °F)
Boiling point/Boiling range:	193 °C (379 °F)
Sublimation temperature / start:	Not determined

Flash point:	62 °C (144 °F)
Flammability (solid, gaseous)	Not determined.
Ignition temperature:	370 °C (698 °F)
Decomposition temperature:	Not determined
Auto igniting:	Not determined.

Danger of explosion:	Not determined.
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Explosion limits:

Lower:	1.2 Vol %
Upper:	7 Vol %
Vapor pressure at 20 °C (68 °F):	0.67 hPa (1 mm Hg)
Density at 20 °C (68 °F):	0.956 g/cm ³ (7.978 lbs/gal)
Relative density	Not determined.
Vapor density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
Water at 20 °C (68 °F):	1 g/l
Partition coefficient (n-octanol/water):	Not determined.
Viscosity:	
dynamic:	Not determined.
kinematic:	Not determined.

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USA

Product name: **N,N-Dimethylaniline**

Other information No further relevant information available. (Contd. of page 3)




10 Stability and reactivity
Reactivity No information known.
Chemical stability Stable under recommended storage conditions.
Thermal decomposition / conditions to be avoided: Decomposition will not occur if used and stored according to specifications.
Possibility of hazardous reactions Reacts with strong oxidizing agents
Conditions to avoid No further relevant information available.
Incompatible materials:
Acids
Oxidizing agents
Halogens
Acid chlorides
Acid anhydrides
Chloroformates
Hazardous decomposition products:
Carbon monoxide and carbon dioxide
Nitrogen oxides

11 Toxicological information
Information on toxicological effects
Acute toxicity:
Toxic in contact with skin.
Toxic if inhaled.
Toxic if swallowed.
Danger through skin absorption.
The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for this substance.
LD/LC50 values that are relevant for classification:
Oral LD50 951 mg/kg (rat)
Dermal LD50 1770 mg/kg (rabbit)
Skin irritation or corrosion: May cause irritation
Eye irritation or corrosion: May cause irritation
Sensitization: No sensitizing effects known.
Germ cell mutagenicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for this substance.
Carcinogenicity:
Suspected of causing cancer.
IARC-3: Not classifiable as to carcinogenicity to humans.
ACGIH A4: Not classifiable as a human carcinogen: Inadequate data on which to classify the agent in terms of its carcinogenicity in humans and/or animals.
The Registry of Toxic Effects of Chemical Substances (RTECS) contains tumorigenic and/or carcinogenic and/or neoplastic data for this substance.
Reproductive toxicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains reproductive data for this substance.
Specific target organ system toxicity - repeated exposure: No effects known.
Specific target organ system toxicity - single exposure: No effects known.
Aspiration hazard: No effects known.
Subacute to chronic toxicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains multiple dose toxicity data for this substance.
Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

12 Ecological information
Toxicity
Aquatic toxicity: No further relevant information available.
Persistence and degradability No further relevant information available.
Bioaccumulative potential No further relevant information available.
Mobility in soil No further relevant information available.
Additional ecological information:
General notes:
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Toxic to aquatic life.
May cause long lasting harmful effects to aquatic life.
Avoid transfer into the environment.
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.
Other adverse effects No further relevant information available.

13 Disposal considerations
Waste treatment methods
Recommendation Consult state, local or national regulations to ensure proper disposal.
Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.

14 Transport information
UN-Number
DOT, IMDG, IATA UN2253
UN proper shipping name
DOT N,N-Dimethylaniline
ADR 2253 N,N-Dimethylaniline
IMDG, IATA N,N-DIMETHYLANILINE

Product name: N,N-Dimethylaniline	
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Transport hazard class(es) DOT 	
Class Label ADR	6.1 Toxic substances 6.1
	
Class Label IMDG, IATA	6.1 (T1) Toxic substances 6.1
	
Class Label	6.1 Toxic substances 6.1
Packing group DOT, ADR, IMDG, IATA	II
Environmental hazards:	Not applicable.
Special precautions for user EMS Number: Stowage Category	Warning: Toxic substances F-A,S-A A
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
Transport/Additional information:	
DOT Quantity limitations	On passenger aircraft/rail: 5 L On cargo aircraft only: 60 L
Hazardous substance: Marine Pollutant (DOT):	100 lbs, 45.4 kg No
IMDG Limited quantities (LQ) Excepted quantities (EQ)	100 ml Code: E4 Maximum net quantity per inner packaging: 1 ml Maximum net quantity per outer packaging: 500 ml
UN "Model Regulation":	UN 2253 N,N-DIMETHYLANILINE, 6.1, II

15 Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture
GHS label elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)
Hazard pictograms



GHS06 GHS08

Signal word Danger

Hazard statements

H227 Combustible liquid.
H301+H311+H331 Toxic if swallowed, in contact with skin or if inhaled.
H351 Suspected of causing cancer.

Precautionary statements

P210 Keep away from flames and hot surfaces. No smoking.
P201 Obtain special instructions before use.
P261 Avoid breathing dust/fume/gas/mist/vapors/spray
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

National regulations

All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.
All components of this product are listed on the Canadian Domestic Substances List (DSL).

SARA Section 313 (specific toxic chemical listings)

121-69-7 N,N-Dimethylaniline

California Proposition 65

Prop 65 - Chemicals known to cause cancer Substance is not listed.

Prop 65 - Developmental toxicity Substance is not listed.

Prop 65 - Developmental toxicity, female Substance is not listed.

Prop 65 - Developmental toxicity, male Substance is not listed.

Information about limitation of use: For use only by technically qualified individuals.

Other regulations, limitations and prohibitive regulations

Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006. Substance is not listed.

The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the

market and use must be observed.

Substance is not listed.

Annex XIV of the REACH Regulations (requiring Authorisation for use) Substance is not listed.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

Product name: **N,N-Dimethylaniline**

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16 Other information

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing SDS: Global Marketing Department

Date of preparation/Revision: Print date, revision date and version number are in the header of each page.

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

HMS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

ACGIH: American Conference of Governmental Industrial Hygienists (USA)

OSHA: Occupational Safety and Health Administration (USA)

NTP: National Toxicology Program (USA)

IARC: International Agency for Research on Cancer

EPA: Environmental Protection Agency (USA)

Flam. Liq. 4: Flammable liquids – Category 4

Acute Tox. 3: Acute toxicity – Category 3

Carc. 2: Carcinogenicity – Category 2