

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

**N,N-Dimethyl-1,4-phenylene diammonium dichloride for analysis**

Revision date: 20.07.2023

Product code: 25224

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

N,N-Dimethyl-1,4-phenylene diammonium dichloride for analysis

CAS No: 536-46-9  
EC No: 208-635-7**1.2. Relevant identified uses of the substance or mixture and uses advised against****Use of the substance/mixture**

Laboratory chemical

Industrial uses: Uses of substances as such or in preparations at industrial sites

Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

**Uses advised against**

Do not use for private purposes (household).

**1.3. Details of the supplier of the safety data sheet**

Company name:	AnalytiChem GmbH	
Street:	Stempelstraße 6	
Place:	D-47167 Duisburg	
Telephone:	0203/5194-0	Telefax: 0203/5194-290
E-mail:	info@analytichem.de	
Contact person:	Abteilung Produktsicherheit	Telephone: 0203/5194-107/117
E-mail:	produktsicherheit@analytichem.de	
Internet:	www.analytichem.de	
Responsible Department:	Abteilung Produktsicherheit	

**1.4. Emergency telephone number:**

For Hazardous Materials [or Dangerous Goods] Incidents Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 Outside USA and Canada: +1 703-741-5970 (collect calls accepted)

**Further Information**

A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Regulation (EC) No 1272/2008**Acute Tox. 2; H300  
Acute Tox. 3; H331  
Acute Tox. 3; H311  
Eye Irrit. 2; H319

Full text of hazard statements: see SECTION 16.

**2.2. Label elements****Regulation (EC) No 1272/2008**

Signal word: Danger

Pictograms:



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#### Hazard statements

H300 Fatal if swallowed.  
H311+H331 Toxic in contact with skin or if inhaled.  
H319 Causes serious eye irritation.

#### Precautionary statements

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.  
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.  
P330 Rinse mouth.  
P403+P233 Store in a well-ventilated place. Keep container tightly closed.

#### 2.3. Other hazards

No data available

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Sum formula: C<sub>8</sub>H<sub>12</sub>N<sub>2</sub> \* 2HCl  
Molecular weight: 209,11 g/mol

#### Hazardous components

CAS No	Chemical name	Quantity
	EC No	Index No
	REACH No	
	Classification (Regulation (EC) No 1272/2008)	
536-46-9	N,N-dimethylbenzene-1,4-diaminedihydrochloride	100 %
	208-635-7	
	Acute Tox. 2, Acute Tox. 3, Acute Tox. 3, Eye Irrit. 2; H300 H331 H311 H319	

Full text of H and EUH statements: see section 16.

#### Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
536-46-9	208-635-7	N,N-dimethylbenzene-1,4-diaminedihydrochloride	100 %
		inhalation: ATE = 3 mg/l (vapours); inhalation: ATE = 0,5 mg/l (dusts or mists); dermal: ATE = 300 mg/kg; oral: ATE = 5 mg/kg	

#### Further Information

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

##### General information

Self-protection of the first aider

##### After inhalation

Provide fresh air.  
If breathing is irregular or stopped, administer artificial respiration.  
Call a physician immediately.

##### After contact with skin

After contact with skin, wash immediately with plenty of water and soap.  
Take off immediately all contaminated clothing and wash it before reuse.  
Call a physician immediately.

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#### **After contact with eyes**

Rinse immediately carefully and thoroughly with eye-bath or water.  
Remove contact lenses, if present and easy to do. Continue rinsing.

#### **After ingestion**

Rinse mouth immediately and drink plenty of water.  
Water, to which activated charcoal may be added  
Call a physician immediately.

#### **4.2. Most important symptoms and effects, both acute and delayed**

Methaemoglobinaemia  
Headache  
Cardiac arrhythmias  
Blood pressure drop  
Dyspnoea  
Spasms  
Cyanosis (blue coloured blood)

#### **4.3. Indication of any immediate medical attention and special treatment needed**

No data available

## **SECTION 5: Firefighting measures**

### **5.1. Extinguishing media**

#### **Suitable extinguishing media**

Co-ordinate fire-fighting measures to the fire surroundings.

#### **Unsuitable extinguishing media**

no restriction

### **5.2. Special hazards arising from the substance or mixture**

Combustible solids  
Hazardous combustion products  
In case of fire may be liberated:  
Nitrogen oxides (NO<sub>x</sub>)  
Hydrochloric gas

### **5.3. Advice for firefighters**

Wear a self-contained breathing apparatus and chemical protective clothing.  
Avoid contact with skin, eyes and clothes.

#### **Additional information**

Suppress gases/vapours/mists with water spray jet.  
Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

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

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

#### **For non-emergency personnel**

Provide adequate ventilation.  
Use personal protection equipment.  
Avoid contact with skin, eyes and clothes.  
Remove persons to safety.  
Emergency procedures  
Do not breathe dust/fume/gas/mist/vapours/spray.

#### **For emergency responders**

Precautionary statements For emergency responders : Personal protection equipment: see section 8

### **6.2. Environmental precautions**

Do not allow to enter into surface water or drains.

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#### **6.3. Methods and material for containment and cleaning up**

##### **For containment**

- Cover drains.
- Prevent spread over a wide area (e.g. by containment or oil barriers).
- Collect in closed and suitable containers for disposal.
- Take up carefully when dry. Take up dust-free and set down dust-free.

##### **For cleaning up**

- Clean contaminated articles and floor according to the environmental legislation.

##### **Other information**

- Provide adequate ventilation.
- Do not breathe dust/fume/gas/mist/vapours/spray.
- Wear breathing apparatus if exposed to vapours/dusts/aerosols.

#### **6.4. Reference to other sections**

- Safe handling: see section 7
- Personal protection equipment: see section 8
- Disposal: see section 13

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

#### **7.1. Precautions for safe handling**

##### **Advice on safe handling**

- If handled uncovered, arrangements with local exhaust ventilation have to be used.
- Avoid dust formation.
- Do not breathe dust.
- Read label before use.

##### **Advice on protection against fire and explosion**

- No special fire protection measures are necessary.

##### **Advice on general occupational hygiene**

- Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme.
- Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

##### **Further information on handling**

- Take off contaminated clothing. Draw up and observe skin protection programme.
- Wash hands and face before breaks and after work and take a shower if necessary.
- Take off immediately all contaminated clothing and wash it before reuse.

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

##### **Requirements for storage rooms and vessels**

- Store in a dry place.
- Store in a place accessible by authorized persons only.

##### **Further information on storage conditions**

- Store in a well-ventilated place. Keep container tightly closed.
- storage temperature < +30°C
- Protect against: Light

#### **7.3. Specific end use(s)**

- Laboratory chemicals

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

#### **8.1. Control parameters**

#### **8.2. Exposure controls**

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#### Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment.

Provide adequate ventilation as well as local exhaustion at critical locations.

#### Individual protection measures, such as personal protective equipment

##### Eye/face protection

Suitable eye protection: goggles.

##### Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Protective gloves are recommended Company KCL GmbH, D-36124 Eichenzell, email: [vertrieb@kcl.de](mailto:vertrieb@kcl.de) With specification (test according to EN374):

By long-term hand contact

Trade name/designation KCL 741 Dermatril® L

Recommended material: NBR (Nitrile rubber) 0,11 mm

Wearing time with permanent contact: > 480 min

By short-term hand contact

Trade name/designation KCL 741 Dermatril® L

Recommended material: NBR (Nitrile rubber) 0,11 mm

Wearing time with occasional contact (splashes): > 480 min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

#### Skin protection

Wear suitable protective clothing.

Full protection suit

#### Respiratory protection

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Filtering device with filter or ventilator filtering device of type: P3

#### Environmental exposure controls

Do not allow to enter into surface water or drains.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state:	solid
Colour:	white / yellow
Odour:	odourless
Odour threshold:	No data available
Melting point/freezing point:	208-212 °C
Boiling point or initial boiling point and boiling range:	No data available
Flammability:	not determined

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Lower explosion limits:	not determined
Upper explosion limits:	not determined
Flash point:	not determined
Auto-ignition temperature:	not determined
Decomposition temperature:	No data available
pH-Value (at 20 °C):	~1,6 (50 g/l)
Viscosity / kinematic:	not determined
Water solubility: (at 20 °C)	~2000 g/L
Solubility in other solvents not determined	
Dissolution rate:	No data available
Partition coefficient n-octanol/water:	not determined
Dispersion stability:	No data available
Vapour pressure:	No data available
Vapour pressure:	not determined
Density:	No data available
Bulk density:	~500 kg/m <sup>3</sup>
Relative vapour density:	not determined
Particle characteristics:	No data available

#### **9.2. Other information**

##### **Information with regard to physical hazard classes**

Explosive properties No data available	
Sustaining combustion:	No data available
Self-ignition temperature	
Solid:	not determined
Gas:	not applicable

##### **Other safety characteristics**

Evaporation rate:	not determined
Solvent separation test:	not determined
Solvent content:	not determined
Solid content:	100%
Sublimation point:	not determined
Softening point:	not determined
Pour point:	not determined
not determined:	
Viscosity / dynamic:	not determined
Flow time:	not determined

##### **Further Information**

not determined

## SECTION 10: Stability and reactivity

### **10.1. Reactivity**

Danger of dust explosion.

### **10.2. Chemical stability**

Protect against:  
Light  
Humidity  
Air  
Heat

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**10.3. Possibility of hazardous reactions**

Acids  
Oxidising agent  
Acid halogen

**10.4. Conditions to avoid**

Light  
Humidity  
Air  
Heat

**10.5. Incompatible materials**

No data available

**10.6. Hazardous decomposition products**

In case of fire may be liberated:  
SECTION 5: Firefighting measures

**Further information**

No data available

**SECTION 11: Toxicological information**

**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**

**Toxicokinetics, metabolism and distribution**

No data available

**Acute toxicity**

Fatal if swallowed.  
Toxic in contact with skin.  
Toxic if inhaled.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
536-46-9	N,N-dimethylbenzene-1,4-diaminedihydrochloride				
	oral	ATE 5 mg/kg			
	dermal	ATE 300 mg/kg			
	inhalation vapour	ATE 3 mg/l			
	inhalation dust/mist	ATE 0,5 mg/l			

**Irritation and corrosivity**

Causes serious eye irritation.  
Skin corrosion/irritation: Based on available data, the classification criteria are not met.

**Sensitising effects**

Based on available data, the classification criteria are not met.

**Carcinogenic/mutagenic/toxic effects for reproduction**

Based on available data, the classification criteria are not met.

**STOT-single exposure**

Based on available data, the classification criteria are not met.

**STOT-repeated exposure**

Based on available data, the classification criteria are not met.

**Aspiration hazard**

Based on available data, the classification criteria are not met.

**Information on likely routes of exposure**

No data available

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#### Specific effects in experiment on an animal

No data available

#### Additional information on tests

No data available

#### Practical experience

No data available

#### 11.2. Information on other hazards

##### Endocrine disrupting properties

No data available

##### Other information

No data available

#### Further information

Methaemoglobinaemia

Headache

Cardiac arrhythmias

Blood pressure drop

Dyspnoea

Spasms

Cyanosis (blue coloured blood)

### SECTION 12: Ecological information

#### 12.1. Toxicity

Based on available data, the classification criteria are not met.

#### 12.2. Persistence and degradability

No data available

#### 12.3. Bioaccumulative potential

No data available

#### 12.4. Mobility in soil

No data available

#### 12.5. Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

#### 12.6. Endocrine disrupting properties

This substance does not have endocrine disrupting properties with respect to non-target organisms.

#### 12.7. Other adverse effects

Discharge into the environment must be avoided.

#### Further information

Do not allow to enter into surface water or drains.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

##### Disposal recommendations

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

Send to a physico-chemical treatment facility under observation of official regulations.

Do not empty into drains.

##### Contaminated packaging

Handle contaminated packages in the same way as the substance itself.

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.



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**SECTION 14: Transport information**

**Land transport (ADR/RID)**

**14.1. UN number or ID number:** UN 2811  
**14.2. UN proper shipping name:** TOXIC SOLID, ORGANIC, N.O.S.  
 (N,N-dimethylbenzene-1,4-diaminedihydrochloride)  
**14.3. Transport hazard class(es):** 6.1  
**14.4. Packing group:** II  
 Hazard label: 6.1  
 Classification code: T2  
 Special Provisions: 274 614  
 Limited quantity: 500 g  
 Excepted quantity: E4  
 Transport category: 2  
 Hazard No: 60  
 Tunnel restriction code: D/E

**Inland waterways transport (ADN)**

**14.1. UN number or ID number:** UN 2811  
**14.2. UN proper shipping name:** TOXIC SOLID, ORGANIC, N.O.S.  
 (N,N-dimethylbenzene-1,4-diaminedihydrochloride)  
**14.3. Transport hazard class(es):** 6.1  
**14.4. Packing group:** II  
 Hazard label: 6.1  
 Classification code: T2  
 Special Provisions: 274 614 802  
 Limited quantity: 500 g  
 Excepted quantity: E4

**Marine transport (IMDG)**

**14.1. UN number or ID number:** UN 2811  
**14.2. UN proper shipping name:** TOXIC SOLID, ORGANIC, N.O.S.  
 (N,N-dimethylbenzene-1,4-diaminedihydrochloride)  
**14.3. Transport hazard class(es):** 6.1  
**14.4. Packing group:** II  
 Hazard label: 6.1  
 Special Provisions: 274  
 Limited quantity: 500 g  
 Excepted quantity: E4  
 EmS: F-A, S-A

**Air transport (ICAO-TI/IATA-DGR)**

**14.1. UN number or ID number:** UN 2811  
**14.2. UN proper shipping name:** TOXIC SOLID, ORGANIC, N.O.S.  
 (N,N-dimethylbenzene-1,4-diaminedihydrochloride)  
**14.3. Transport hazard class(es):** 6.1  
**14.4. Packing group:** II  
 Hazard label: 6.1  
 Special Provisions: A3 A5  
 Limited quantity Passenger: 1 kg  
 Passenger LQ: Y644  
 Excepted quantity: E4  
 IATA-packing instructions - Passenger: 669  
 IATA-max. quantity - Passenger: 25 kg  
 IATA-packing instructions - Cargo: 676  
 IATA-max. quantity - Cargo: 100 kg

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#### 14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

#### 14.7. Maritime transport in bulk according to IMO instruments

not applicable

### SECTION 15: Regulatory information

#### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

##### EU regulatory information

Information according to 2012/18/EU (SEVESO III): H2 ACUTE TOXIC

##### National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water hazard class (D): 3 - highly hazardous to water

#### 15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out.

### SECTION 16: Other information

#### Changes

This data sheet contains changes from the previous version in section(s): 9,12.

#### 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

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

Acute Tox: Acute toxicity

Eye Irrit: Eye irritation

#### Relevant H and EUH statements (number and full text)

H300 Fatal if swallowed.

H311 Toxic in contact with skin.

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

H319 Causes serious eye irritation.

H331 Toxic if inhaled.