

Safety Data Sheet

#90031377 · Full 16-section SDS

According to Regulation (EC) No 1907/2006

According to Regulation (EC) No 2020/878

PRODUCT	CAS NUMBER	FORMULA	VERSION	REVISION DATE
1,4-Phenylenediamine dihydrochloride	624-18-0	C6H10Cl2N2	10	12 Oct 2026

SECTION 1

Identification

1.1 Product identifier

Product name 1,4-Phenylenediamine dihydrochloride

CAS number 624-18-0

EC / EINECS number 210-834-9

Chemical formula C6H10Cl2N2

Molecular weight 181.06

SMILES C1=CC(=CC=C1N)N.Cl.Cl

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

For research use, laboratory use, manufacture of chemicals. Not suitable for human or veterinary purposes

1.3 Details of the supplier of the safety data sheet

Molekula Limited
1 Millennium Way, Newton Aycliffe
Durham, DL5 6JW, United Kingdom
info@molekula.com · +44 (0) 3302 000333

1.4 Emergency telephone number

0344 892 0111 — National Poisons Information Service (NPIS) (United Kingdom — for healthcare professionals (via TOXBASE))

SECTION 2

Hazard identification

2.1 Classification of the substance or mixture

Acute Tox. 3; H301
Acute Tox. 3; H311
Acute Tox. 3; H331
Skin Sens. 1; H317
Eye Irrit. 2; H319
Aquatic Acute 1; H400
Aquatic Chronic 1; H410

2.2 Label elements



DANGER

CODE	HAZARD STATEMENT
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H301 + H311	Toxic if swallowed, in contact with skin or if inhaled
+ H331	

H317	May cause an allergic skin reaction
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H319	Causes serious eye irritation
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H400	Very toxic to aquatic life
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H410	Very toxic to aquatic life with long lasting effects
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CODE	PRECAUTIONARY STATEMENT
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P260	Do not breathe dust/fume/gas/mist/vapours/spray
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P273	Avoid release to the environment
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P280	Wear protective gloves/protective clothing/eye protection/face protection
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P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
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P302+P352	IF ON SKIN: Wash with soap and water
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P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
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2.3 Other hazards

Does not meet PBT or vPvB criteria under REACH Annex XIII. This product does not contain any known or suspected Endocrine disruptors.

SECTION 3

Composition / information on ingredients**3.1 Substances**

Name	1,4-Phenylenediamine dihydrochloride
CAS number	624-18-0
EC number	210-834-9
Concentration / purity	c. 100%
Classification according to Regulation (EC) No 1272/2008	Acute Tox. 3; H301 Acute Tox. 3; H311 Acute Tox. 3; H331 Skin Sens. 1; H317 Eye Irrit. 2; H319 Aquatic Acute 1; H400 Aquatic Chronic 1; H410
Hazard statements	H301 + H311 + H331, H317, H319, H400, H410
Acute toxicity estimate (ATE)	<i>No data available</i>
Impurities / stabilising additives	<i>Not applicable</i>

SECTION 4

First-aid measures**4.1 Description of first aid measures**

Inhalation	Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
Skin contact	Wash with plenty of water. Continue to rinse for at least 15 minutes and seek medical attention.
Eye contact	Remove contact lenses if present. Rinse eyes with water. Continue to rinse for at least 15 minutes and seek medical attention.
Ingestion	IF SWALLOWED: give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only if the persons are fully conscious and awake). Administer activated charcoal (20 - 40g in a 10% slurry) and consult a doctor as quickly as possible. Do not attempt to neutralise.

Get medical attention if any discomfort continues. Show this Safety Data Sheet (SDS) to medical personnel. First aiders/ medical personnel need to protect themselves.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically

SECTION 5

Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media For this substance/mixture no limitations of extinguishing agents are given.

Unsuitable extinguishing media No limitation of extinguishing media given.

5.2 Special hazards arising from the substance or mixture

Hazardous decomposition products: Carbon / Nitrogen oxides, Hydrogen chloride gas

5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing. Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6

Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid breathing dust/fume/gas/mist/vapours/spray. Provide adequate ventilation. For personal protection, see section 8.

6.2 Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

6.3 Methods and material for containment and cleaning up

Absorb spillage with a suitable absorbent material.

6.4 Reference to other sections

For specific precautions, see Section 8 and Section 13.

SECTION 7

Handling & storage

7.1 Precautions for safe handling

Observe good chemical hygiene practices. Keep away from food, drink and animal feeding stuffs. Wash contaminated skin thoroughly after handling. Do not eat, drink or smoke when using this product. Remove contaminated clothing and launder thoroughly before re-use.

7.2 Conditions for safe storage, including any incompatibilities

Storage temperature Ambient

Conditions for safe storage (incompatibilities) Light sensitive.
Store under inert gas.

7.3 Specific end use(s)

See Section 1.2.

SECTION 8

Exposure controls / personal protection**8.1 Control parameters**

Occupational exposure limits (OEL / WEL) *Not applicable*

DNEC/PNEC data *Not applicable*

8.2 Exposure controls

Eye / face protection Safety glasses
Wear eye/face protection as recommended. All eye/face protection should comply with EN ISO 16321-1:2022.

Skin / hand protection Gloves: Nitrile Rubber, 0.11mm (480 mins).

Respiratory protection Self-contained breathing apparatus
Keep self-contained breathing apparatus readily available for emergency use. Provide adequate ventilation. If ventilation is insufficient, suitable respiratory protection must be provided. Respiratory equipment: Reusable Air-Purifying Respirator (APR). Filter type: ABEK. Standard: EN 14387.

Other protection *No data available*

Environmental exposure controls *No data available*

SECTION 9

Physical & chemical properties**9.1 Information on basic physical and chemical properties**

Appearance / physical state Solid
DERIVED FROM: LITERATURE

Colour *Not applicable*

Odour Not known
DERIVED FROM: LITERATURE

Melting / freezing point 275°C
DERIVED FROM: LITERATURE

Boiling point *Not applicable*

Flammability *No data available*

Lower and upper explosion limit *No data available*

Flash point *Not applicable*

Auto-ignition temperature *Not applicable*

Decomposition temperature *No data available*

pH *Not applicable*

Acidity Neutral
DERIVED FROM: LITERATURE

Kinematic viscosity *No data available*

Solubility	<i>Not applicable</i>
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Partition coefficient n-octanol/water (log value)	<i>Not applicable</i>
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Vapour pressure	<i>Not applicable</i>
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Density (g/mL)	1 g/mL DERIVED FROM: LITERATURE
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Relative vapour density	<i>No data available</i>
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Particle characteristics	<i>No data available</i>
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9.2 Other information

No data available

SECTION 10

Stability & reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under the prescribed storage conditions

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

Avoid direct sunlight

10.5 Incompatible materials

No data available

10.6 Hazardous decomposition products

See section 5

SECTION 11

Toxicological information

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

Acute toxicity (LD50 / LC50)	LD50 Oral - Rat - 147 mg/kg Ref: Progress Report for Contract No. NIH-NCI-E-C-72-3252, Submitted to the National Cancer Institute by Litton Bionetics, Inc., NCI-E-C-72-3252 (1973)
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Skin corrosion / irritation	<i>Not applicable</i>
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Eye corrosion / irritation	Causes serious eye irritation
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Respiratory / skin sensitisation	May cause an allergic skin reaction
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Carcinogenicity	<i>Not applicable</i>
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Mutagenicity	<i>Not applicable</i>
Reproductive toxicity	<i>Not applicable</i>
STOT (single / repeated exposure)	<i>Not applicable</i>
Aspiration hazard	<i>Not applicable</i>

11.2 Information on other hazards

Not applicable

SECTION 12

Ecological information

12.1 Toxicity

Not applicable

12.2 Persistence and degradability

Not applicable

12.3 Bioaccumulative potential

Not applicable

12.4 Mobility in soil

Not applicable

12.5 Results of PBT and vPvB assessment

Not applicable

12.6 Endocrine disrupting properties

See Section 11.2.

12.7 Other adverse effects

No data available

SECTION 13

Disposal considerations

13.1 Waste treatment methods

Dispose of in accordance with local/national regulations

SECTION 14

Transport information

14.1 UN number or ID number

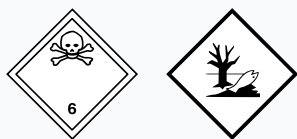
UN1673

14.2 UN proper shipping name

PHENYLENEDIAMINES

14.3 Transport hazard class(es)

6.1



14.4 Packing group

III

14.5 Environmental hazards

Marine pollutant

14.6 Special precautions for user

Special precautions for user For specific precautions see Section 8 and Section 13

Transport category 2

Tunnel code (E)

Packing instruction (ADR) P002

Packing instruction (IMDG) P002

14.7 Maritime transport in bulk according to IMO instruments

No data available

SECTION 15

Regulatory information

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

Substance-specific regulations (e.g. licences)

National Regulations:

-Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances

Other regulations, limitations and legal regulations:

-Directive 94/33/EC- The protection of young people at work.

REACH code Y110

ECHA notification *Not applicable*

15.2 Chemical safety assessment

Not applicable

SECTION 16

Other information

Revision notes / other information

Replaces previous SDS ver. 1, published 11th May 2021
Harmonised Entry: 612-029-00-1

Full list of H-Statements:

H301 Toxic if swallowed

H311 Toxic in contact with skin

H317 May cause an allergic skin reaction

H319 Causes serious eye irritation

H331 Toxic if inhaled

H400 Very toxic to aquatic life

H410 Very toxic to aquatic life with long lasting effects

This Safety Data Sheet was generated automatically from the data Molekula holds against this product, in the 16-section GHS/CLP format. Fields shown as "No data available" carry no recorded value; fields shown as "Not applicable" were assessed as not relevant to this substance. For queries, contact Molekula at info@molekula.com.