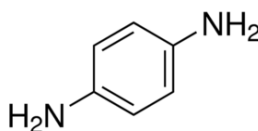


MATERIAL SAFETY DATA SHEET (MSDS)

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Substance
:
EC index no : 612-028-00-6
EC no : 203-404-7
CAS No : 106-50-3
Product code : 05209
Chemical structure :



Synonyms : 1,4-Diaminobenzene / 1,4-Benzenediamine / 1,4-Phenylenediamine

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Laboratory chemicals, Manufacture of substances

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

LOBA CHEMIE PVT.LTD.
107 Wode House Road, Jehangir Villa, Colaba
400005 Mumbai - INDIA
T +91 22 6663 6663 - F +91 22 6663 6699
info@lobachemie.com - www.lobachemie.com

1.4. Emergency telephone number

Emergency number : + 91 22 6663 6663 (9:00am - 6:00 pm)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity (oral), Category 3 H301
Acute toxicity (dermal), Category 3 H311
Acute toxicity (inhal.), Category 3 H331
Serious eye damage/eye irritation, Category 2 H319
Sensitisation — Skin, category 1 H317
Hazardous to the aquatic H410

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environment — Chronic
Hazard, Category 1

Full text of classification categories and H statements : see section 16

Classification according to Directive 67/548/EEC or 1999/45/EC

T; R23/24/25

Xi; R36

R43

N; R50/53

Full text of R-phrases: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)

:



GHS06



GHS09

Signal word (CLP)

: Danger

Hazard statements (CLP)

: H301+H311+H331 - Toxic if swallowed, in contact with skin or if inhaled
H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation
H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements (CLP)

: P261 - Avoid breathing dust/fume/gas/mist/vapours/spray
P273 - Avoid release to the environment
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P301+P310 - IF SWALLOWED: immediately call a POISON CENTER or doctor/physician
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P311 - Call a POISON CENTER or doctor/physician

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Name : p-PHENYLENEDIAMINE Extra Pure
CAS No : 106-50-3
EC no : 203-404-7
EC index no : 612-028-00-6

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Full text of R- and H-phrases: see section 16

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Give oxygen or artificial respiration if necessary. If you feel unwell, seek medical advice.
First-aid measures after skin contact	: Immediately call a POISON CENTER or doctor/physician. Remove/Take off immediately all contaminated clothing. Wash with plenty of soap and water. Specific measures (see ... on this label). Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention. Specific treatment (see ... on this label).
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Rinse mouth. Obtain emergency medical attention. Immediately call a POISON CENTER or doctor/physician. Specific treatment (see ... on this label).

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

Symptoms/injuries after inhalation	: May cause an allergic skin reaction.
Symptoms/injuries after skin contact	: Repeated exposure to this material can result in absorption through skin causing significant health hazard. Toxic in contact with skin.
Symptoms/injuries after eye contact	: Causes serious eye irritation.
Symptoms/injuries after ingestion	: Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: dry chemical powder, alcohol-resistant foam, carbon dioxide (CO ₂).
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Protection during firefighting	: Do not attempt to take action without suitable protective equipment.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures	: Evacuate unnecessary personnel.
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6.1.2. For emergency responders

Protective equipment	: Use personal protective equipment as required.
Emergency procedures	: Ventilate area.

6.2. Environmental precautions

Very toxic to aquatic life with long lasting effects.

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6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Clear up rapidly by scoop or vacuum.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid breathing dust/fume/gas/mist/vapours/spray.
Hygiene measures : Do not eat, drink or smoke when using this product. Wash ... thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in original container. Keep container tightly closed. Store in a dry place. Protect from moisture.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Hand protection : protective gloves
Eye protection : Chemical goggles or safety glasses
Skin and body protection : Wear suitable protective clothing
Respiratory protection : Wear respiratory protection

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid
Molecular mass : 108.14 g/mol
Colour : white.
Odour : No data available
Odour threshold : No data available
pH : 9 at 50 g/l at 20 °C
Relative evaporation rate (butylacetate=1) : No data available
Melting point : 138 - 143
Freezing point : No data available
Boiling point : 267 °C

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Flash point	: 155.56 °C
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: 3.71
Relative density	: No data available
Solubility	: Water: 10 g/l at 20 °C
Log Pow	: 0.25
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: ≥ 0.015 vol %

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Direct sunlight. Air contact. Moisture.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Toxic if swallowed. Dermal: Toxic in contact with skin. Inhalation: Toxic if inhaled.

Skin corrosion/irritation : Not classified
pH: 9 at 50 g/l at 20 °C

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Serious eye damage/irritation	: Causes serious eye irritation. pH: 9 at 50 g/l at 20 °C
Respiratory or skin sensitisation	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Potential adverse human health effects and symptoms	: Toxic if swallowed. Toxic in contact with skin.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water : Very toxic to aquatic life with long lasting effects.

12.2. Persistence and degradability

p-PHENYLENEDIAMINE Extra Pure (106-50-3)

Persistence and degradability	May cause long-term adverse effects in the environment.
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12.3. Bioaccumulative potential

p-PHENYLENEDIAMINE Extra Pure (106-50-3)

Log Pow	0.25
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12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations	: Dispose of contents/container to ...
Ecology - waste materials	: Hazardous waste due to toxicity.

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SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR)	: 1673
UN-No. (IMDG)	: 1673
UN-No.(IATA)	: 1673
UN-No.(ADN)	: 1673
UN-No. (RID)	: 1673

14.2. UN proper shipping name

Proper Shipping Name (ADR)	: PHENYLENEDIAMINES (O-, M-, P-)
Proper Shipping Name (IMDG)	: PHENYLENEDIAMINES (o-, m-, p-)
Proper Shipping Name (IATA)	: PHENYLENEDIAMINES
Proper Shipping Name (ADN)	: PHENYLENEDIAMINES (o-, m-, p-)
Proper Shipping Name (RID)	: PHENYLENEDIAMINES (o-, m-, p-)
Transport document description (ADR)	: UN 1673 PHENYLENEDIAMINES (O-, M-, P-), 6.1, III, (E), ENVIRONMENTALLY HAZARDOUS
Transport document description (IMDG)	: UN 1673 PHENYLENEDIAMINES (o-, m-, p-), 6.1, III, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS
Transport document description (IATA)	: UN 1673 PHENYLENEDIAMINES, 6.1, III, ENVIRONMENTALLY HAZARDOUS
Transport document description (ADN)	: UN 1673 PHENYLENEDIAMINES (o-, m-, p-), 6.1, III, ENVIRONMENTALLY HAZARDOUS
Transport document description (RID)	: UN 1673 PHENYLENEDIAMINES (o-, m-, p-), 6.1, III, ENVIRONMENTALLY HAZARDOUS

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR)	: 6.1
Danger labels (ADR)	: 6.1



IMDG

Transport hazard class(es) (IMDG)	: 6.1
Danger labels (IMDG)	: 6.1



IATA

Transport hazard class(es) (IATA)	: 6.1
Hazard labels (IATA)	: 6.1



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ADN

Transport hazard class(es) (ADN) : 6.1

Danger labels (ADN) : 6.1



RID

Transport hazard class(es) (RID) : 6.1

Danger labels (RID) : 6.1



14.4. Packing group

Packing group (ADR) : III

Packing group (IMDG) : III

Packing group (IATA) : III

Packing group (ADN) : III

Packing group (RID) : III

14.5. Environmental hazards

Dangerous for the environment : Yes

Marine pollutant : Yes

Other information : No supplementary information available

14.6. Special precautions for user

- Overland transport

Classification code (ADR) : T2

Special provision (ADR) : 279

Limited quantities (ADR) : 5kg

Excepted quantities (ADR) : E1

Packing instructions (ADR) : P002, IBC08, LP02, R001

Special packing provisions (ADR) : B3

Mixed packing provisions (ADR) : MP10

Portable tank and bulk container instructions (ADR) : T1

Portable tank and bulk container special provisions (ADR) : TP33

Tank code (ADR) : SGAH, L4BH

Tank special provisions (ADR) : TU15, TE19

Vehicle for tank carriage : AT

Transport category (ADR) : 2

Special provisions for carriage - Bulk (ADR) : VC1, VC2, AP7

Special provisions for carriage - Loading, unloading and handling (ADR) : CV13, CV28

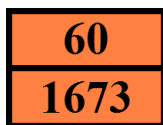
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Special provisions for carriage - Operation : S9
(ADR)

Hazard identification number (Kemler No.) : 60

Orange plates :



Tunnel restriction code (ADR) :

E

EAC code :

2X

- Transport by sea

Special provision (IMDG) :

279

Limited quantities (IMDG) :

5 kg

Excepted quantities (IMDG) :

E1

Packing instructions (IMDG) :

P002, LP02

IBC packing instructions (IMDG) :

IBC08

IBC special provisions (IMDG) :

B3

Tank instructions (IMDG) :

T1

Tank special provisions (IMDG) :

TP33

EmS-No. (Fire) :

F-A

EmS-No. (Spillage) :

S-A

Stowage category (IMDG) :

A

MFAG-No

: 153

- Air transport

PCA Excepted quantities (IATA) :

E1

PCA Limited quantities (IATA) :

Y645

PCA limited quantity max net quantity
(IATA) :

10kg

PCA packing instructions (IATA) :

670

PCA max net quantity (IATA) :

100kg

CAO packing instructions (IATA) :

677

CAO max net quantity (IATA) :

200kg

Special provision (IATA) :

A113

ERG code (IATA) :

6L

- Inland waterway transport

Classification code (ADN) :

T2

Special provisions (ADN) :

279, 802

Limited quantities (ADN) :

5 kg

Excepted quantities (ADN) :

E1

Equipment required (ADN) :

PP, EP

Number of blue cones/lights (ADN) :

0

- Rail transport

Classification code (RID) :

T2

Special provision (RID) :

279

Limited quantities (RID) :

5kg

Excepted quantities (RID) :

E1

Packing instructions (RID) :

P002, IBC08, LP02, R001

Special packing provisions (RID) :

B3

Mixed packing provisions (RID) :

MP10

Portable tank and bulk container
instructions (RID) :

T1

Portable tank and bulk container special
provisions (RID) :

TP33

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Tank codes for RID tanks (RID)	: SGAH, L4BH
Special provisions for RID tanks (RID)	: TU15
Transport category (RID)	: 2
Special provisions for carriage – Bulk (RID)	: VC1, VC2, AP7
Special provisions for carriage – Loading and unloading (RID)	: CW13, CW28, CW31
Colis express (express parcels) (RID)	: CE11
Hazard identification number (RID)	: 60

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

p-PHENYLENEDIAMINE Extra Pure is not on the REACH Candidate List

p-PHENYLENEDIAMINE Extra Pure is not on the REACH Annex XIV List

15.1.2. National regulations

Germany

AwSV/VwVwS Annex reference : Water hazard class (WGK) 3, strongly hazardous to water (Classification according to VwVwS, Annex 2; WGK No 1594)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Denmark

Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product
Pregnant/breastfeeding women working with the product must not be in direct contact with the product

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of R-, H- and EUH-phrases:

Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3
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Acute Tox. 3 (Inhalation)	Acute toxicity (inhal.), Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Skin Sens. 1	Sensitisation — Skin, category 1
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
H410	Very toxic to aquatic life with long lasting effects
R23/24/25	Toxic by inhalation, in contact with skin and if swallowed
R36	Irritating to eyes
R43	May cause sensitisation by skin contact
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
N	Dangerous for the environment
T	Toxic
Xi	Irritant

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product