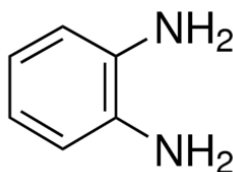


### MATERIAL SAFETY DATA SHEET (MSDS)

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

##### 1.1. Product identifier

Product form : Substance  
:  
EC index no : 612-145-00-2  
EC no : 202-430-6  
CAS No : 95-54-5  
Product code : 05207  
Chemical structure :



Synonyms : OPD / 1,2-Diaminobenzene / 1,2-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

SPAN LAB  
UNIT NO. 14, SKY INDUSTRIAL ESTATE, WALIV, VASAI (E)  
401208 Mumbai - INDIA  
PH: +91 9820509929  
[info@spanlab.in](mailto:info@spanlab.in) [www.spanlab.in](http://www.spanlab.in)

#### 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 4 H312  
Acute toxicity (inhal.), Category 4 H332  
Serious eye damage/eye irritation, Category 2 H319

# o-PHENYLENEDIAMINE FOR SYNTHESIS

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Sensitisation — Skin, category 1	H317
Germ cell mutagenicity, Category 2	H341
Carcinogenicity, Category 2	H351
Hazardous to the aquatic environment — Chronic Hazard, Category 1	H410

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

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

T; N; Carc.Cat.3; Muta.Cat.3; R20/21-25-36-43-50/53-68

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

GHS08

GHS09

Signal word (CLP) :

Danger

Hazard statements (CLP) :

H301 - Toxic if swallowed  
H312+H332 - Harmful in contact with skin or if inhaled  
H317 - May cause an allergic skin reaction  
H319 - Causes serious eye irritation  
H341 - Suspected of causing genetic defects  
H351 - Suspected of causing cancer  
H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements (CLP) :

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  
P501 - Dispose of contents/container to ...

## 2.3. Other hazards

No additional information available

# o-PHENYLENEDIAMINE FOR SYNTHESIS

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### SECTION 3: Composition/information on ingredients

#### 3.1. Substance

Name	:	o-PHENYLENEDIAMINE FOR SYNTHESIS
CAS No	:	95-54-5
EC no	:	202-430-6
EC index no	:	612-145-00-2

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 general	:	Suspected of causing cancer.
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. Specific measures (see ... on this label). Wash with plenty of soap and water. 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	:	Suspected of causing genetic defects.
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. Harmful 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 <sub>2</sub> ).
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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# **o-PHENYLENEDIAMINE FOR SYNTHESIS**

## Safety Data Sheet

### **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.

##### **6.1.2. For emergency responders**

Protective equipment : Use personal protective equipment as required.

Emergency procedures : Stop release.

#### **6.2. Environmental precautions**

Very toxic to aquatic life with long lasting effects.

#### **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. Obtain special instructions before use. Use personal protective equipment as required. Do not handle until all safety precautions have been read and understood.

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

# **o-PHENYLENEDIAMINE FOR SYNTHESIS**

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Colour	: Brownish yellow.
Odour	: acetic odor.
Odour threshold	: No data available
pH	: 8.7
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: 100 - 102
Freezing point	: No data available
Boiling point	: 256 - 258
Flash point	: 136 °C
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: 0.01 mm Hg at 250C
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 1.03 g/cm <sup>3</sup>
Solubility	: Water: Soluble in water
Log Pow	: 0.15
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

# o-PHENYLENEDIAMINE FOR SYNTHESIS

## Safety Data Sheet

### 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: Harmful in contact with skin. Inhalation: Harmful if inhaled.

Skin corrosion/irritation : Not classified  
pH: 8.7

Serious eye damage/irritation : Causes serious eye irritation.  
pH: 8.7

Respiratory or skin sensitisation : May cause an allergic skin reaction.

Germ cell mutagenicity : Suspected of causing genetic defects.

Carcinogenicity : Suspected of causing cancer.

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 : Harmful in contact with skin. Toxic if swallowed.

## SECTION 12: Ecological information

### 12.1. Toxicity

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

### 12.2. Persistence and degradability

#### o-PHENYLENEDIAMINE FOR SYNTHESIS (95-54-5)

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

#### o-PHENYLENEDIAMINE FOR SYNTHESIS (95-54-5)

Log Pow	0.15
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### 12.4. Mobility in soil

No additional information available

# o-PHENYLENEDIAMINE FOR SYNTHESIS

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### 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.

## 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

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## Safety Data Sheet



### IATA

Transport hazard class(es) (IATA) : 6.1

Hazard labels (IATA) : 6.1



### 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

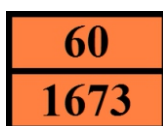
Special packing provisions (ADR) : B3



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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
Special provisions for carriage - Operation (ADR)	: S9
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

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### - 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
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

o-PHENYLENEDIAMINE FOR SYNTHESIS is not on the REACH Candidate List

o-PHENYLENEDIAMINE FOR SYNTHESIS 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 821)

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  
The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal

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### 15.2. Chemical safety assessment

No additional information available

### SECTION 16: Other information

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

Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Carc. 2	Carcinogenicity, Category 2
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Muta. 2	Germ cell mutagenicity, Category 2
Skin Sens. 1	Sensitisation — Skin, category 1
H301	Toxic if swallowed
H312	Harmful in contact with skin
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H332	Harmful if inhaled
H341	Suspected of causing genetic defects
H351	Suspected of causing cancer
H410	Very toxic to aquatic life with long lasting effects
T	Toxic

*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*