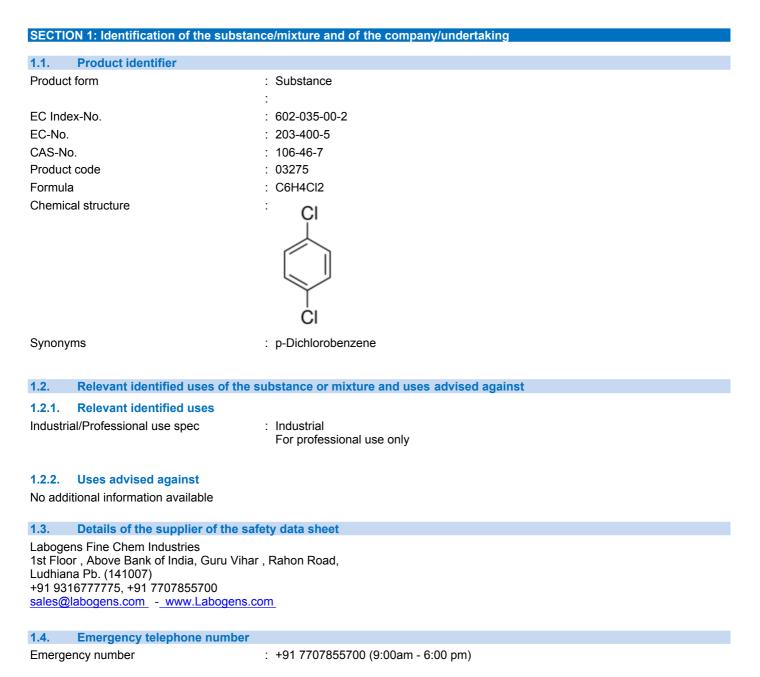
# 1,4-DICHLOROBENZENE FOR SYNTHESIS MSDS



## CAS-No.: 106-46-7 MSDS

## **MATERIAL SAFETY DATA SHEET (MSDS)**



#### **SECTION 2: Hazards identification**

#### 2.1. Classification of the substance or mixture

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

Serious eye damage/eye H319 irritation, Category 2 Carcinogenicity, Category H351 2

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Hazardous to the aquatic H410 environment — Chronic Hazard, Category 1

Full text of H statements : see section 16

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD] Carc.Cat.3; R40 Xi; R36 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)		
	GHS07 GHS08 GHS09	
Signal word (CLP)	: Warning	
Hazard statements (CLP)	<ul> <li>H319 - Causes serious eye irritation.</li> <li>H351 - Suspected of causing cancer.</li> <li>H410 - Very toxic to aquatic life with long lasting effects.</li> </ul>	
Precautionary statements (CLP)	<ul> <li>P273 - Avoid release to the environment.</li> <li>P281 - Use personal protective equipment as required.</li> <li>P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes.</li> <li>Remove contact lenses, if present and easy to do. Continue rinsing.</li> <li>P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation</li> </ul>	

#### 2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients	
3.1. Substances	
Name	: 1,4-DICHLOROBENZENE For Synthesis
CAS-No.	: 106-46-7
EC-No.	: 203-400-5
EC Index-No.	: 602-035-00-2

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

#### 3.2. Mixtures

Not applicable

SECTION 4: First aid measures	
4.1. Description of first aid measures	
	: Suspected of causing cancer.
-	: Assure fresh air breathing. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
First-aid measures after skin contact	: Wash with plenty of water/ Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Get immediate medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.
First-aid measures after ingestion	: Rinse mouth. Do not induce vomiting.
4.2. Most important symptoms and ef	fects, both acute and delayed
Symptoms/effects after eye contact	: Causes serious eye irritation.
4.3. Indication of any immediate med	cal attention and special treatment needed
Treat symptomatically.	
SECTION 5: Firefighting measures	
5.1. Extinguishing media	
Suitable extinguishing media	: Carbon dioxide. Dry powder. Foam. Water spray.
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 enter fire area without proper protective equipment, including respiratory protection.
SECTION 6: Accidental release measures	
6.1. Personal precautions, protective	equipment and emergency procedures
0 71	: Evacuate unnecessary personnel.
6.1.2. For emergency responders	
	: Use personal protective equipment as required.
Emergency procedures	: Ventilate area.
6.2. Environmental precautions	
Very toxic to aquatic life with long lasting effe	ects.
, , , , , , , , , , , , , , , , , , , ,	
6.3. Methods and material for contain	ment and cleaning up
Methods for cleaning up	: On land, sweep or shovel into suitable containers. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible.
6.4. Reference to other sections	
No additional information available	

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SECTION 7: Handling and storage		
7.1. Precautions for safe handling	g	
Precautions for safe handling	: Obtain special instructions before use. Avoid contact with skin and eyes. Do not breathe vapours. Provide good ventilation in process area to prevent formation of vapour.	
Hygiene measures	: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.	
7.2. Conditions for safe storage, including any incompatibilities		
Storage conditions	: Store in a well-ventilated place. Keep container tightly closed.	
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 a	nd chemical properties		
Physical state	: Solid		
Molecular mass Colour	: 147 g/mol : White powder.		
Odour	: No data available		
Odour threshold	: No data available		
рН	: No data available		
Relative evaporation rate (butylacetate=1)	: No data available		
Melting point	: 52 - 56 °C		
Freezing point	: No data available		
Boiling point	: No data available		
Flash point	: No data available		
Auto-ignition temperature	: No data available		
Decomposition temperature	: No data available		
Flammability (solid, gas)	: No data available		
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Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Solubility	: No data available
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2.	Other information
No add	itional information available
SECTIO	DN 10: Stability and reactivity
10.1.	Reactivity
No add	itional information available
10.2.	Chemical stability
Stable	under normal conditions.
10.3.	Possibility of hazardous reactions
No add	itional information available
10.4.	Conditions to avoid

Direct sunlight. Moisture. High temperature.

#### 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 e	effects	
Acute toxicity	: Not classified	
,		
Skin corrosion/irritation	: Not classified	
Serious eye damage/irritation	: Causes serious eye irritation.	
Respiratory or skin sensitisation	: Not classified	
Germ cell mutagenicity	: Not classified	
Carcinogenicity	: Suspected of causing cancer.	
Depreductive toxicity		
Reproductive toxicity	: Not classified	
STOT-single exposure	: Not classified	

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STOT-repeated exposure	: Not classified
STOT-repeated exposure	
Aspiration hazard	: Not classified
-	

SECTION 12: Ecological information	
12.1. Toxicity	
Ecology - water	: Very toxic to aquatic life with long lasting effects.

12.2. Persistence and degradability		
1,4-DICHLOROBENZENE For Synthesis (106-46-7)		
Persistence and degradability	May cause long-term adverse effects in the environment.	
12.3. Bioaccumulative potential		
No additional information available		
12.4. Mobility in soil		
No additional information available		
12.5. Results of PBT and vPvB asses	sment	
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	: Dispose of contents/container to hazardous or special waste collection point, in	
recommendations	accordance with local, regional, national and/or international regulation.	
SECTION 14: Transport information		
In accordance with ADR / RID / IMDG / IAT	A / ADN	
14.1. UN number		
UN-No. (ADR)	: 3077	
UN-No. (IMDG)	: 3077	
UN-No. (IATA)	: 3077	
UN-No. (ADN)	: 3077	
UN-No. (RID)	: 3077	

14.2. UN proper shipping name	
Proper Shipping Name (ADR)	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Proper Shipping Name (IMDG)	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Proper Shipping Name (IATA)	: Environmentally hazardous substance, solid, n.o.s.

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Proper Shipping Name (ADN)	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Proper Shipping Name (RID)	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Transport document description (ADR)	: UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III, (-)
Transport document description (IMDG)	: UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III, MARINE POLLUTANT
Transport document description (IATA)	: UN 3077 Environmentally hazardous substance, solid, n.o.s., 9, III
Transport document description (ADN)	: UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III
Transport document description (RID)	: UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III

#### 14.3. Transport hazard class(es)

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



: 9

: 9



#### IMDG

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



#### ΙΑΤΑ

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



: 9

: 9

:9 :9



#### ADN

Transport hazard class(es) (ADN) Danger labels (ADN)



#### RID

Transport hazard class(es) (RID)	
Danger labels (RID)	

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14.4. Packing group			
Packing group (ADR)	: 111		
Packing group (IMDG)	: 111		
Packing group (IATA)	: 111		
Packing group (ADN)	: 111		
Packing group (RID)	: 111		
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)	: M7
Special provisions (ADR)	: 274, 335, 375, 601
Limited quantities (ADR)	: 5kg
Excepted quantities (ADR)	: E1
Packing instructions (ADR)	: P002, IBC08, LP02, R001
Special packing provisions (ADR)	: PP12, B3
Mixed packing provisions (ADR)	: MP10
Portable tank and bulk container instructions (ADR)	: T1, BK1, BK2, BK3
Portable tank and bulk container spe provisions (ADR)	cial : TP33
Tank code (ADR)	: SGAV, LGBV
Vehicle for tank carriage	: AT
Transport category (ADR)	: 3
Special provisions for carriage - Pack (ADR)	kages : V13
Special provisions for carriage - Bulk (ADR)	: VC1, VC2
Special provisions for carriage - Load unloading and handling (ADR)	ding, : CV13
Hazard identification number (Kemle	r No.) : 90
Orange plates	<sup>:</sup> 90
	3077
Tunnel restriction code (ADR)	: -
EAC code	: 2Z
- Transport by sea	
Special provisions (IMDG)	: 274, 335, 966, 967, 969
Limited quantities (IMDG)	: 5 kg
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: LP02, P002
Special packing provisions (IMDG)	: PP12
IBC packing instructions (IMDG)	: IBC08

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IBC special provisions (IMDG)	: B3
Tank instructions (IMDG)	: BK1, BK2, BK3, T1
Tank special provisions (IMDG)	: TP33
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-F
Stowage category (IMDG)	: A
Stowage and handling (IMDG)	: SW23
MFAG-No	: 171
- Air transport	
PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y956
PCA limited quantity max net quantity	: 30kgG
(IATA)	
PCA packing instructions (IATA)	: 956
PCA max net quantity (IATA)	: 400kg
CAO packing instructions (IATA)	: 956
CAO max net quantity (IATA)	: 400kg
Special provisions (IATA)	: A97, A158, A179, A197
ERG code (IATA)	: 9L
- Inland waterway transport	117
Classification code (ADN)	: M7
Special provisions (ADN)	: 274, 335, 375, 601
Limited quantities (ADN)	: 5 kg
Excepted quantities (ADN)	: E1
Carriage permitted (ADN)	: T* B**
Equipment required (ADN)	: PP, A
Number of blue cones/lights (ADN)	: 0
Additional requirements/Remarks (ADN)	: * Only in the molten state. ** For carriage in bulk see also 7.1.4.1. ** * Only in the case of transport in bulk.
- Rail transport	
Classification code (RID)	: M7
Special provisions (RID)	: 274, 335, 375, 601
Excepted quantities (RID)	: E1
Packing instructions (RID)	: P002, IBC08, LP02, R001
Special packing provisions (RID)	: PP12, B3
Mixed packing provisions (RID)	: MP10
Portable tank and bulk container instructions (RID)	: T1, BK1, BK2, BK3
Portable tank and bulk container special provisions (RID)	: TP33
Tank codes for RID tanks (RID)	: SGAV, LGBV
Transport category (RID)	: 3
Special provisions for carriage – Packages (RID)	: W13
Special provisions for carriage – Bulk (RID)	: VC1, VC2
Special provisions for carriage - Loading, unloading and handling (RID)	: CW13, CW31
Colis express (express parcels) (RID)	: CE11
Hazard identification number (RID)	: 90

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

Not applicable

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#### **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

1,4-DICHLOROBENZENE For Synthesis is not on the REACH Candidate List

1,4-DICHLOROBENZENE For Synthesis is not on the REACH Annex XIV List

#### 15.1.2. National regulations

Germany	
Reference to AwSV	: Water hazard class (WGK) 2, significant hazard to water (Classification according to AwSV; ID No. 642)
12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV	: Is not subject of the 12. BlmSchV (Hazardous Incident Ordinance)
Netherlands	
SZW-lijst van kankerverwekkende stoffen	: The substance is not listed
SZW-lijst van mutagene stoffen	: The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding	: The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid	: The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling	: The substance is not listed
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

#### 15.2. **Chemical safety assessment**

No additional information available

**SECTION 16: Other information** 

#### Full text of R-, H- and EUH-statements:

Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1	
Carc. 2	Carcinogenicity, Category 2	
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Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H319	Causes serious eye irritation.
H351	Suspected of causing cancer.
H410	Very toxic to aquatic life with long lasting effects.
R36	Irritating to eyes
R40	Limited evidence of a carcinogenic effect
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
Ν	Dangerous for the environment
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