

# Ethylene Dichloride 1,2-DICHLOROETHANE FOR SYNTHESIS MSDS



CAS No: 107-06-2 MSDS

## 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 : 602-012-00-7  
EC no : 203-458-1  
CAS No : 107-06-2  
Product code : B-01170  
Formula : C<sub>2</sub>H<sub>4</sub>Cl<sub>2</sub>  
Chemical structure : ClCH2CH2Cl  
  
Synonyms : Ethylene dichloride

#### 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

Bio-Chem Chemicals  
5455, Nicholson Road Science Market,  
Ambala Cantt. 133001 Haryana (India)  
+91-82952 41953  
[info@biofinechemical.com](mailto:info@biofinechemical.com) - [www.biofinechemical.com](http://www.biofinechemical.com)

#### 1.4. Emergency telephone number

Emergency number : +91 99921 51495 (10.00am - 06.30pm) (Office Hours)

### SECTION 2: Hazards identification

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

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

Flammable liquids, H225  
Category 2  
Carcinogenicity, Category H350  
1B  
Acute toxicity (oral), H302  
Category 4  
Serious eye damage/eye H319  
irritation, Category 2  
Skin corrosion/irritation, H315  
Category 2  
Specific target organ H335  
toxicity — Single

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exposure, Category 3,  
Respiratory tract irritation

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

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

Carc.Cat.2; R45

F; R11

Xn; R22

Xi; R36/37/38

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) :



GHS02

GHS08

GHS07

Signal word (CLP) : Danger

Hazard statements (CLP) : H225 - Highly flammable liquid and vapour  
H302 - Harmful if swallowed  
H315 - Causes skin irritation  
H319 - Causes serious eye irritation  
H335 - May cause respiratory irritation  
H350 - May cause cancer

Precautionary statements (CLP) : P201 - Obtain special instructions before use  
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking  
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray  
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes.  
Remove contact lenses, if present and easy to do. Continue rinsing  
P308+P313 - IF exposed or concerned: Get medical advice/attention

#### 2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

### SECTION 3: Composition/information on ingredients

#### 3.1. Substance

Name : 1,2-DICHLOROETHANE For Synthesis  
CAS No : 107-06-2  
EC no : 203-458-1

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EC index no : 602-012-00-7

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 victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

First-aid measures after skin contact : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation 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. Call a POISON CENTER or doctor/physician if you feel unwell.

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

Symptoms/injuries : May cause cancer.

Symptoms/injuries after inhalation : May cause respiratory irritation.

Symptoms/injuries after skin contact : Causes skin irritation.

Symptoms/injuries after eye contact : Causes serious eye irritation.

Symptoms/injuries after ingestion : 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

Fire hazard : Highly flammable liquid and vapour.

Explosion hazard : May form flammable/explosive vapour-air mixture.

#### 5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment.

### SECTION 6: Accidental release measures

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

General measures : Remove ignition sources. Use special care to avoid static electric charges. No naked lights. No smoking.

##### 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.

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#### 6.2. Environmental precautions

Avoid release to the environment.

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

Methods for cleaning up : Collect spillage. 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

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapours are flammable.

Precautions for safe handling : No naked lights. No smoking. Use only non-sparking tools. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing dust/fume/gas/mist/vapours/spray. Use only outdoors or in a well-ventilated area.

Hygiene measures : Do not eat, drink or smoke when using this product. Wash ... thoroughly after handling.

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

Technical measures : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/... equipment.

Storage conditions : Keep in fireproof place. Keep container tightly closed.

Incompatible materials : Heat sources.

#### 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 : Liquid

Molecular mass : 98.96 g/mol

Colour : Clear Colorless.

Odour : chloroform-like odor.

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Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: -35 °C
Freezing point	: No data available
Boiling point	: 82 - 84
Flash point	: 13 °C
Auto-ignition temperature	: 413 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: Flammable Highly flammable liquid and vapour
Vapour pressure	: 86 hPa at 20 °C
Relative vapour density at 20 °C	: No data available
Relative density	: 1.25 at 20 °C
Density	: 1.24 g/cm <sup>3</sup>
Solubility	: Water: 8.69 g/l at 20 °C
Log Pow	: 1.48
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: 0.062 - 0.162 vol %

#### 9.2. Other information

No additional information available

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

Highly flammable liquid and vapour.

#### 10.2. Chemical stability

Highly flammable liquid and vapour. May form flammable/explosive vapour-air mixture.

#### 10.3. Possibility of hazardous reactions

No additional information available

#### 10.4. Conditions to avoid

Open flame. Direct sunlight.

#### 10.5. Incompatible materials

No additional information available

#### 10.6. Hazardous decomposition products

May release flammable gases.

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#### SECTION 11: Toxicological information

##### 11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed.

Skin corrosion/irritation : Causes skin irritation.

Serious eye damage/irritation : Causes serious eye irritation.

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : May cause cancer.

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : May cause respiratory irritation.

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

Potential adverse human health effects and symptoms : Harmful if swallowed.

#### SECTION 12: Ecological information

##### 12.1. Toxicity

No additional information available

##### 12.2. Persistence and degradability

No additional information available

##### 12.3. Bioaccumulative potential

<b>1,2-DICHLOROETHANE For Synthesis (107-06-2)</b>	
Log Pow	1.48

##### 12.4. Mobility in soil

No additional information available

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

<b>1,2-DICHLOROETHANE For Synthesis (107-06-2)</b>	
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII	
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII	

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#### 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 ...

Additional information : Handle empty containers with care because residual vapours are flammable.

#### SECTION 14: Transport information

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

##### 14.1. UN number

UN-No. (ADR) : 1184

UN-No. (IMDG) : 1184

UN-No.(IATA) : 1184

UN-No.(ADN) : 1184

UN-No. (RID) : 1184

##### 14.2. UN proper shipping name

Proper Shipping Name (ADR) : ETHYLENE DICHLORIDE

Proper Shipping Name (IMDG) : ETHYLENE DICHLORIDE

Proper Shipping Name (IATA) : ETHYLENE DICHLORIDE

Proper Shipping Name (ADN) : ETHYLENE DICHLORIDE

Proper Shipping Name (RID) : ETHYLENE DICHLORIDE

Transport document description (ADR) : UN 1184 ETHYLENE DICHLORIDE, 3 (6.1), II, (D/E)

Transport document description (IMDG) : UN 1184 ETHYLENE DICHLORIDE, 3 (6.1), II (13°C c.c.)

Transport document description (IATA) : UN 1184 ETHYLENE DICHLORIDE, 3 (6.1), II

Transport document description (ADN) : UN 1184 ETHYLENE DICHLORIDE, 3 (6.1), II

Transport document description (RID) : UN 1184 ETHYLENE DICHLORIDE, 3 (6.1), II

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

###### ADR

Transport hazard class(es) (ADR) : 3 (6.1)

Danger labels (ADR) : 3, 6.1



###### IMDG

Transport hazard class(es) (IMDG) : 3 (6.1)

Danger labels (IMDG) : 3, 6.1



###### IATA

Transport hazard class(es) (IATA) : 3 (6.1)

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Hazard labels (IATA) : 3, 6.1



#### ADN

Transport hazard class(es) (ADN) : 3 (6.1)

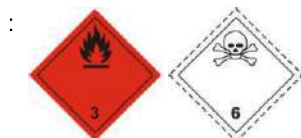
Danger labels (ADN) : 3, 6.1



#### RID

Transport hazard class(es) (RID) : 3 (6.1)

Danger labels (RID) : 3, 6.1



#### 14.4. Packing group

Packing group (ADR) : II

Packing group (IMDG) : II

Packing group (IATA) : II

Packing group (ADN) : II

Packing group (RID) : II

#### 14.5. Environmental hazards

Dangerous for the environment : No

Marine pollutant : No

Other information : No supplementary information available

#### 14.6. Special precautions for user

##### - Overland transport

Classification code (ADR) : FT1

Limited quantities (ADR) : 1L

Excepted quantities (ADR) : E2

Packing instructions (ADR) : P001, IBC02

Mixed packing provisions (ADR) : MP19

Portable tank and bulk container instructions (ADR) : T7

Portable tank and bulk container special provisions (ADR) : TP1

Tank code (ADR) : L4BH

Tank special provisions (ADR) : TU15

Vehicle for tank carriage : FL

Transport category (ADR) : 2



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

Special provisions for carriage - Operation (ADR) : S2, S19

Hazard identification number (Kemler No.) : 336

Orange plates :



Tunnel restriction code (ADR) : D/E

EAC code : 2YE

#### - Transport by sea

Limited quantities (IMDG) : 1 L

Excepted quantities (IMDG) : E2

Packing instructions (IMDG) : P001

IBC packing instructions (IMDG) : IBC02

Tank instructions (IMDG) : T7

Tank special provisions (IMDG) : TP1

EmS-No. (Fire) : F-E

EmS-No. (Spillage) : S-D

Stowage category (IMDG) : B

Stowage and handling (IMDG) : SW2

Flash point (IMDG) : 13°C c.c.

MFAG-No : 131

#### - Air transport

PCA Excepted quantities (IATA) : E2

PCA Limited quantities (IATA) : Y341

PCA limited quantity max net quantity (IATA) : 1L

PCA packing instructions (IATA) : 352

PCA max net quantity (IATA) : 1L

CAO packing instructions (IATA) : 364

CAO max net quantity (IATA) : 60L

ERG code (IATA) : 3P

#### - Inland waterway transport

Classification code (ADN) : FT1

Special provisions (ADN) : 802

Limited quantities (ADN) : 1 L

Excepted quantities (ADN) : E2

Carriage permitted (ADN) : T

Equipment required (ADN) : PP, EP, EX, TOX, A

Ventilation (ADN) : VE01, VE02

Number of blue cones/lights (ADN) : 2

#### - Rail transport

Classification code (RID) : FT1

Limited quantities (RID) : 1L

Excepted quantities (RID) : E2

Packing instructions (RID) : P001, IBC02

Mixed packing provisions (RID) : MP19

Portable tank and bulk container instructions (RID) : T7

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Portable tank and bulk container special provisions (RID) : TP1  
Tank codes for RID tanks (RID) : L4BH  
Special provisions for RID tanks (RID) : TU15  
Transport category (RID) : 2  
Special provisions for carriage – Loading and unloading (RID) : CW13, CW28  
Colis express (express parcels) (RID) : CE7  
Hazard identification number (RID) : 336

#### 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

1,2-dichloroethane is on the REACH Candidate List

1,2-dichloroethane (EDC) is on the REACH Annex XIV List:

Authorisation number	Sunset date	REACH authorization exemptions
	22/11/2017	

##### 15.1.2. National regulations

###### Germany

AwSV/VwVwS Annex reference : Water hazard class (WGK) 3, strongly hazardous to water (KBwS-Beschluss; WGK No 102)

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

###### Denmark

Class for fire hazard : Class I-1

Store unit : 1 liter

Classification remarks : F <Flam. Liq. 2>; Emergency management guidelines for the storage of flammable liquids must be followed

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

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#### SECTION 16: Other information

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

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Carc. 1B	Carcinogenicity, Category 1B
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H225	Highly flammable liquid and vapour
H302	Harmful if swallowed
H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H350	May cause cancer
R11	Highly flammable
R22	Harmful if swallowed
R36/37/38	Irritating to eyes, respiratory system and skin
R45	May cause cancer
F	Highly flammable
Xi	Irritant
Xn	Harmful

*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*