

ETHYLENE DICHLORIDE (EDC)

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

1.1. Product identifier

Product name: Ethylene dichloride (EDC)
 CAS Number: 107-06-2
 EC Number: 203-458-1

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

Product use: Industrial purposes, Isolated intermediate
 Restricted to professional users.

1.3 Details of the supplier of the safety data sheet

Company name: East Harbour Group Ltd
 20 Clough Road, Severalls Industrial Park
 Colchester, Essex, CO4 9QS
 United Kingdom

Telephone: +44 (0) 333 242 0100
 Email: info@eastharbourgroup.com

1.4 Emergency telephone number

Emergency telephone: 0800 246 1274

Section 2: Hazardous identification

2.1 Classification of the substance or mixture

Classified according to Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.

Flam. Liq. 2; H225, Highly flammable liquid and vapour.

Acute Tox. 4; H302, Harmful if swallowed.

Skin Irrit. 2; H315, Causes skin irritation.

Eye Irrit. 2; H319, Causes serious eye irritation.

STOT SE 3; H335, May cause respiratory irritation.

Carc. 1B; H350, May cause cancer.

2.2 Label elements

Pictogram



Signal word

Danger

Hazard statement(s)

Highly flammable liquid and vapour. (H225)

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Harmful if swallowed. (H302)
 Causes skin irritation. (H315)
 Causes serious eye irritation. (H319)
 May cause respiratory irritation. (H335)
 May cause cancer. (H350)

Precautionary statement(s)

General	-
Prevention	Obtain special instructions before use. (P201) Wear face protection/protective gloves/protective clothing. (P280)
Response	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. (P305+P351+P338) IF exposed or concerned: Get medical advice/attention. (P308+P313)
Storage	Store in a well-ventilated place. Keep cool. (P403+P235)
Disposal	Dispose of contents/container in accordance with local regulation (P501)
Hazardous substances	1,2-dichlorethan
Additional labelling	Restricted to professional users. UFI: 4489-SHUG-WVGS-U2YD

2.3. Other hazards

Additional warnings

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

This product does not contain any substances considered to be endocrine disruptors in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

Section 3: Composition/information on ingredients

3.1. Substances

Product/substance	Identifiers	% w/w	Classification	Note
1,2-dichlorethan	CAS No.: 107-06-2 EC No.: 203-458-1 UK-REACH: Index No.: 602-012-00-7	100 %	Flam. Liq. 2, H225 Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Carc. 1B, H350	[1], [2], [4], [5]

3.2. Mixtures

Not applicable. This product is a substance.

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

Other information

[1] European occupational exposure limit.

[2] Substance is on the list of substances subject to authorization under the UK REACH Regulations (Annex XIV).

[4] Substance is listed in Annex I of the Prior Informed Consent Regulation (PIC, Regulation (EU) 649/2012).

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[5] Substance is included in the Candidate List of substances of very high concern (SVHC).

Section 4: First aid measures

4.1 Description of first aid measures

General information

In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet. Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

Inhalation

Upon breathing difficulties or irritation of the respiratory tract: Bring the person into fresh air and stay with him/her.

Skin contact

Remove contaminated clothing and shoes immediately. Ensure to wash exposed skin thoroughly with water and soap. Skin cleanser can be used. DO NOT use solvents or thinners.

If skin irritation occurs: Get medical advice/attention.

Eye contact

If in eyes: Flush eyes immediately with plenty of water or isotonic water (20-30 °C) for at least 5 minutes and continue until irritation stops. Remove contact lenses. Make sure to flush under upper and lower eyelids. If irritation continues, contact a doctor. Continue flushing during transport.

Ingestion

IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

Rinse mouth.

Burns

Rinse with water until pain stops then continue to rinse for 30 minutes.

4.2 Most important symptoms and effects, both acute and delayed

Irritation effects

This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

Neurotoxic effects

This product contains organic solvents, which may cause adverse effects to the nervous system. Symptoms of neurotoxicity include: loss of appetite, headache, dizziness, ringing in ears, tingling sensations of skin, sensitivity to the cold, cramps, difficulty in concentrating, tiredness, etc. Repeated exposure to solvents can result in the breaking down of the skin's natural fat layer and may result in an increased absorption potential of other hazardous substances at the area of exposure.

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

IF exposed or concerned:

Get immediate medical advice/attention.

Information to medics

Bring this safety data sheet or the label from this product.

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Section 5: Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media

Alcohol-resistant foam, carbon dioxide, powder, water mist.

Unsuitable extinguishing media

Waterjets should not be used, since they can spread the fire.

5.2. Special hazards arising from the substance or mixture.

Highly flammable liquid and vapour.

In use may form flammable/explosive vapour-air mixture.

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fireextinguishing water to enter the sewage system and nearby surface waters.

If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:

Halogenated compounds

Carbon oxides (CO / CO₂)

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact The National Poisons Information Service (dial 111, 24 h service) in order to obtain further advice.

Hazchem Code: 2YE

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Storages not yet ignited must be cooled by water mist. Remove flammable materials if conditions allow it.

Ensure sufficient ventilation.

Avoid direct contact with spilled substances.

Ensure adequate ventilation, especially in confined areas.

Avoid inhalation of vapours from spilled material.

Contaminated areas may be slippery.

6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc. In the event of leakage to the surroundings, contact local environmental authorities.

6.3. Methods and material for containment and cleaning up

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

6.4. Reference to other sections

See section 13 "Disposal considerations" on handling of waste.

See section 8 "Exposure controls/personal protection" for protective measures.

Section 7: Handling and storage

7.1. Precautions for safe handling

Ground and bond container and receiving equipment.

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Use explosion-proof [electrical/lighting/ventilating] equipment.

Use non-sparking tools.

Take action to prevent static discharges.

Avoid direct contact with the product.

Avoid contact during pregnancy and while nursing.

Smoking, drinking and consumption of food is not allowed in the work area.

See section 8 "Exposure controls/personal protection" for information on personal protection.

7.2. Conditions for safe storage, including any incompatibilities

Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Take action to prevent static discharges.

Must be stored in a cool and well-ventilated area, away from possible sources of ignition.

Recommended storage material

Keep only in original packaging.

Storage temperature

Dry, cool and well ventilated

Incompatible materials

Alkaline metals

7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2.

Section 8: Exposure controls/personal protection

8.1. Control parameters

1,2-dichlorethan

Long term exposure limit (8 hours) (ppm): 5

Long term exposure limit (8 hours) (mg/m³): 21

Annotations

Carc = Capable of causing cancer and/or heritable genetic damage.

Sk = Can be absorbed through the skin and lead to systemic toxicity.

The Control of Substances Hazardous to Health Regulations 2002. SI 2002/2677 The Stationery Office 2002. EH40/2005 Workplace exposure limits (Fourth Edition 2020).

DNEL

1,2-dichlorethan

Duration:	Route of exposure	DNEL
Long term - Systemic effects - Workers	Dermal	62.4 mg/kg bw/day
Long term - Systemic effects - Workers	Dermal	62.4 mg/kg bw/day
Long term - Systemic effects - General population	Inhalation	2.9 µg/m ³
Long term - Systemic effects - Workers	Inhalation	6.6 mg/m ³
Long term - Systemic effects - Workers	Inhalation	6.6 mg/m ³

PNEC

1,2-dichlorethan

Route of exposure	Duration of Exposure	PNEC
Air		3.4 µg/m ³
Freshwater		1.1 mg/L
Freshwater		1.1 mg/L
Freshwater sediment		11.1 mg/kg
Freshwater sediment		11.1 mg/kg dw
Intermittent release (freshwater)		1.36 mg/L

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Marine water	110 µg/L
Marine water	110 µg/l
Marine water sediment	1.11 mg/kg
Marine water sediment	1,11 mg/kg dw
Predators	8.33 mg/kg
Sewage treatment plant	27.8 mg/L
Sewage treatment plant	27, 8 mg/l
Soil	1.8 mg/kg

8.2. Exposure controls

Compliance with the given occupational exposure limits values should be controlled on a regular basis.

General recommendations

Smoking, drinking and consumption of food is not allowed in the work area.

Exposure scenarios

Exposure limits

There are no exposure scenarios implemented for this product.

Professional users are subjected to the legally set maximum

concentrations for occupational exposure.

See occupational hygiene limit values above.

Do not recirculate outlet air that contain the substances.

The formation of vapours must be kept at a minimum and below current limit values (see above). Installation of a local exhaust system if normal air flow in the work room is not sufficient is recommended.

Ensure eyewash and emergency showers are clearly marked.

Apply standard precautions during use of the product.

Avoid inhalation of vapours.

Take off contaminated clothing and wash it before reuse.

Hygiene measures

Measures to avoid environmental

Exposure

Keep damming materials near the workplace. If possible, collect spillage during work.

Individual protection measures, such as personal protective equipment

Generally Use only UKCA marked protective equipment.

Respiratory Equipment

Type	Class	Colour	Standards	
A	Class 3 (High Capacity)	Brown	EN14387	

Skin protection

Recommended	Type/Category	Standards	
Dedicated work clothing should be worn.	-	-	

Hand protection

Material	Glove thickness (mm)	Breakthrough time	Standards	

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		(min.)		
Butyl	0.7	> 480	EN374-2, EN374-3, EN388, EN421	
Nitrile	0.2	> 480	EN374-2, EN374-3, EN388	

Eye protection

Type	Standards	
Face shield alternatively safety glasses with side shields	EN166	

Section 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	Liquid
Colour	Colourless
Odour / Odour threshold	Chloroform
pH	Testing not relevant or not possible due to the nature of the product.
Density (g/cm³)	1.25
Kinematic viscosity	Testing not relevant or not possible due to the nature of the product.
Particle characteristics	Not applicable - product is a liquid.

Phase changes

Melting point/Freezing point (°C)	- 36 °C
Softening point/range (waxes and pastes) (°C)	Does not apply to liquids.
Boiling point (°C)	83.6
Vapour pressure	102.47 hPa (25 °C)
Relative vapour density	Testing not relevant or not possible due to the nature of the product.
Decomposition temperature (°C)	Testing not relevant or not possible due to the nature of the product.

Data on fire and explosion hazards

Flash point (°C)	13
Flammability (°C)	The material is ignitable.
Auto-ignition temperature (°C)	440
Lower and upper explosion limit (% v/v)	6.2 - 16

Solubility

Solubility in water	7.9 g/L
n-octanol/water coefficient (LogK_{ow})	1.45

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Solubility in fat (g/L) Testing not relevant or not possible due to the nature of the product.

9.2. Other information

Oxidizing properties

Other physical and chemical parameters

Testing not relevant or not possible due to the nature of the product.

No data available.

Section 10: Stability and Reactivity

10.1. Reactivity

No data available.

10.2. Chemical stability

The product is stable under the conditions, noted in section 7 "Handling and storage".

10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid

Do not expose to any forms of heat (e.g. solar radiation). May lead to excess pressure.

Sunlight

Moisture

10.5. Incompatible materials

Alkaline metals

Strong oxidizing agents

10.6. Hazardous decomposition products

The product is not degraded when used as specified in section 1.

Section 11: Toxicological Information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008 as retained and amended in UK law

Acute toxicity

Product/substance	1,2-dichlorethan
Test method	OECD 401
Species	Mouse
Route of exposure	Oral
Test	LD50
Result	413 mg/kg

Product/substance	1,2-dichlorethan
Test method	OECD 403
Species	Rat
Route of exposure	Inhalation
Test	LC50
Result	7.8 mg/l

Product/substance	1,2-dichlorethan
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Test method	OECD 402
Species	Rat
Route of exposure	Dermal
Test	LD50
Result	4890 mg/kg
Harmful if swallowed.	

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/irritation

Causes serious eye irritation.

Respiratory sensitisation

Based on available data, the classification criteria are not met.

Skin sensitisation

Based on available data, the classification criteria are not met.

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Carcinogenicity

May cause cancer.

Reproductive toxicity

Based on available data, the classification criteria are not met.

STOT-single exposure

May cause respiratory irritation.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

11.2. Information on other hazards**Long term effects**

Carcinogenic effects: This product contains substances considered or proven to be carcinogenic. The carcinogenic effects may be triggered subsequent to exposure through inhalation, skin contact or ingestion.

Irritation effects

This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

Neurotoxic effects

This product contains organic solvents, which may cause adverse effects to the nervous system. Symptoms of neurotoxicity include: loss of appetite, headache, dizziness, ringing in ears, tingling sensations of skin, sensitivity to the cold, cramps, difficulty in concentrating, tiredness, etc. Repeated exposure to solvents can result in the breaking down of the skin's natural fat layer and may result in an increased absorption potential of other hazardous substances at the area of exposure.

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Endocrine disrupting properties

This mixture/product does not contain any substances known to have hormone-disrupting properties in relation to health.

Other information

1,2-dichlorethan has been classified by IARC as a group 2B carcinogen.

Section 12: Ecological Information

12.1 Toxicity

Product/substance	1,2-dichlorethan
Test method	OECD 203
Species	Fish, Pimephales promelas
Duration	No data available.
Test	LC50
Result	136 mg/l

Product/substance	1,2-dichlorethan
Test method	OECD 201
Species	Algae, Desmodesmus subspicatus
Duration	No data available.
Test	EC50
Result	166 mg/l

Product/substance	1,2-dichlorethan
Species	Crustacean, Daphnia magna
Duration	No data available.
Test	EC50
Result	160 mg/l

12.2. Persistence and degradability

No data available.

12.3. Bioaccumulative potential

No data available.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

12.6. Endocrine disrupting properties

This mixture/product does not contain any substances considered to have endocrine-disrupting properties in relation to the environment.

12.7. Other adverse effects

None known.

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Section 13: Disposal considerations

Waste treatment methods

Product is covered by the regulations on hazardous waste. (*)

HP 3 Flammable

HP 4 Irritant (skin irritation and eye damage)

HP 5 Specific Target Organ Toxicity (STOT)/Aspiration Toxicity

HP 6 Acute toxicity

HP 7 Carcinogenic

Dispose of contents/container to an approved waste disposal plant.

Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.

EWC code

16 03 05* Organic wastes containing dangerous substances

Specific labelling

Contaminated packing

Packaging containing residues of the product must be disposed of similarly to the product.

Section 14: Transport Information

14.1 UN-Number

ADR, IMDG, IATA

UN1184

14.2 UN proper shipping name

ADR

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IMDG

ETHYLENE DICHLORIDE

IATA

ETHYLENE DICHLORIDE

14.3 Hazard class(es)

ADR

Transport hazard class: 3

Label: 3+6.1

Classification code: FT1



IMDG

Transport hazard class: 3

Label: 3+6.1

Classification code: FT1



IATA

Transport hazard class: 3

Label: 3+6.1

Classification code: FT1



14.4 Packing Group

ADR

II

IMDG

II

IATA

II

14.5 Environmental hazards

ADR

No

IMDG

No

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IATA	No
Other information	
ADR	Limited quantities: 1L Tunnel restriction code: (D/E) See below for additional information.
IMDG	
IMDG	Limited quantities: 1L EmS: F-E S-D See below for additional information.
IATA	See below for additional information.

Additional information

ADR / See Table A, section 3.2.1 for any information on special provisions, requirements, or warnings in connection with transport. See section 5.4.3, for instructions in writing regarding mitigation of damages in relation to incidents or accidents during transport.

IMDG / See section 3.2.1, for any information on special provisions, requirements, or warnings in connection with transport.

IATA / See Table 4.2 for any information on special provisions, requirements, or warnings in connection with transport.

This product is within scope of the regulations of transport of dangerous goods.

Hazchem Code: 2YE

14.6. Special precautions for user

Not applicable.

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

Restrictions for application

Restricted to professional users.

People under the age of 18 shall not be exposed to this product.

Pregnant women and women breastfeeding must not be exposed to this product. The risk, and possible technical precautions or design of the workplace needed to eliminate exposure, must be considered.

Demands for specific education

No specific requirements.

SEVESO - Categories / dangerous substances

P5c - FLAMMABLE LIQUIDS, Qualifying quantity (lowertier): 5.000 tonnes / (upper-tier): 50.000 tonne

UK-REACH, Annex XVII

1,2-dichlorethan is subject to UK-REACH restrictions, UK-REACH annex XVII (entry 40).

Additional information

Not applicable.

Sources

The Management of Health and Safety at Work Regulations 1999.

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The Health and Safety at Work etc. Act 1974 Regulations 2013.
 Control of Major Accident Hazards (COMAH) Regulations 2015.
 Regulation (EU) No 649/2012 concerning the export and import of hazardous chemicals as retained and amended in UK law.
 Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.
 Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP) as retained and amended in UK law.
 Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as retained and amended in UK law.

15.2. Chemical safety assessment

No

Section 16: Other Information

Full text of H-phrases as mentioned in section 3

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.

Abbreviations and acronyms

ADN	European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
ADR	The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration Factor
CAS	Chemical Abstracts Service
CE	Conformité Européenne (European conformity)
CLP	Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
CSA	Chemical Safety Assessment
CSR	Chemical Safety Report
DMEL	Derived Minimal Effect Level
DNEL	Derived No Effect Level
EINECS	European Inventory of Existing Commercial chemical Substances
ES	Exposure Scenario
EUH statement	CLP-specific Hazard statement
EuPCs	European Product Categorisation System
EWC	European Waste Catalogue
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
IARC	International Agency for Research on Cancer (IARC)
IATA	International Air Transport Association
IBC	Intermediate Bulk Container
IMDG	International Maritime Dangerous Goods
LogPow	logarithm of the octanol/water partition coefficient
MARPOL	International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
OECD	Organisation for Economic Co-operation and Development

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PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No Effect Concentration
RID	The Regulations concerning the International Carriage of Dangerous Goods by Rail
RRN	REACH Registration Number
SCL	A specific concentration limit
SVHC	Substances of Very High Concern
STOT-RE	Specific Target Organ Toxicity - Repeated Exposure
STOT-SE	Specific Target Organ Toxicity - Single Exposure
TWA	Time weighted average
UN	United Nations
UVBC	Unknown or variable composition, complex reaction products or of biological materials
VOC	Volatile Organic Compound
vPvB	Very Persistent and Very Bioaccumulative

Additional information

The classification of the substance/mixture in regard of health hazards are in accordance with the calculation methods given by Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.
The classification of the mixture in regard to physical hazards has been based on experimental data.