

Safety Data Sheet

according to 1907/2006/EC, Article 31

Date Printed: 08/06/2015

Version 3

Date Reviewed: 08/06/2015

1: Identification of the Substance/Mixture and of the Company/Undertaking

- **Product Name:** Ethylene Dichloride
- **Synonyms:** 1,2-dichloroethane, EDC
- **CAS Number:**
107-06-2
- **EC Number:**
203-458-1
- **Index Number:**
602-012-00-7
- **REACH Registration Number:** 01-2119484658-20-0028
- **Product Use:** Various industrial uses.
- **Manufacturer/Supplier:**
Formosa Plastics Corporation, Texas
201 Formosa Drive
Point Comfort, TX 77978 USA
+1 (361) 987-7000
E-Mail: MSDS@fpcusa.com

Formosa Plastics Corporation, Louisiana
P.O. Box 271
Baton Rouge, LA 70821 USA
+1 (225) 356-3341
E-Mail: MSDS@fpcusa.com
- **European REACH Representative:** Intertek France
- **Business Division:** Chlor-Alkali

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- **Emergency Telephone Number:**
In case of a chemical emergency, contact CHEMTREC (24 hrs) at:
+1 (800) 424-9300 (United States, Canada, Puerto Rico, Virgin Islands)
+1 (703) 527-3887 (International & Maritime)

2: Hazards Identification

- **Hazard Classification:**



GHS02

Flam. Liq. 2 H225 Highly flammable liquid and vapor.



GHS06

Acute Tox. 3 H331 Toxic if inhaled.



GHS08

Carc. 1B H350 May cause cancer.

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GHS07

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.

· **Signal Word:** DANGER

· **Precautionary Statements:**

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
 P241 Use explosion-proof electrical/ventilating/lighting/equipment.
 P261 Avoid breathing mist/vapors/spray.
 P303+P361+P353 If on skin (or hair): Immediately remove all contaminated clothing. Rinse skin with water/shower.
 P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P309 If exposed or if you feel unwell:
 P310 Immediately call a doctor.
 P501 Dispose of contents/container in accordance with local regulations.

· **NFPA Ratings (scale 0 - 4):**



Health = 2
 Fire = 3
 Reactivity = 0

· **Additional Information:**

If you do not understand the hazards or safety precautions described in this data sheet, contact your supervisor or safety administrator before handling this product.

3: Composition/Information on Ingredients

· **Substances:**

· **CAS No. Description**

107-06-2 1,2-dichloroethane

· **EC Number:** 203-458-1

· **Index Number:** 602-012-00-7

· **Substances of Very High Concern (SVHC):**

107-06-2 1,2-dichloroethane

4: First Aid Measures

· **General information:**

Rescue personnel must wear appropriate protective equipment during removal of victims from contaminated areas.

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· After Inhalation:

Remove victim to fresh air.
Administer oxygen if breathing is difficult.
Administer artificial respiration if breathing has stopped.
Onset of symptoms may be delayed up to 48 hours.
Get immediate medical attention.

· After Skin Contact:

Remove contaminated clothing and shoes. Wash affected area with soap and water.
Use caution to avoid spreading contamination while washing.
Get immediate medical attention.

· After Eye Contact:

In case of accidental contact, immediately flush eyes with water.
Hold eyelids open to ensure adequate flushing.
Remove contact lenses, if present and easy to do. Continue rinsing.
Get immediate medical attention.

· After Swallowing:

Administer 1-2 glasses of water to dilute ingested material.
Never give anything by mouth to an unconscious person.
Get immediate medical attention.

5: Firefighting Measures

· **Suitable Extinguishing Agents:** CO₂, sand, extinguishing powder. Do not use water.

· **Unsuitable Extinguishing Agents:** Water

· **Special Firefighting Hazards:**

Highly flammable liquid and vapor.
Vapors are heavier than air and may travel to an ignition source and flash back.
Closed containers exposed to heat may explode.

· **Protective Equipment:**

In the event of a fire, wear a NIOSH (USA) or CEN (EU) approved self-contained breathing apparatus (SCBA) and full protective clothing.

· **Additional Information:**

Water spray may be used to cool fire exposed containers, dilute spills to non-flammable mixtures, protect personnel attempting to stop leaks and disperse vapors.
Evacuate all non-essential personnel from the danger area.

6: Accidental Release Measures

· **Personal Precautions, Protective Equipment and Emergency Procedures:**

In case of a spill or other accidental release of this material, contact your supervisor, safety administrator, or emergency response team immediately.
Restrict access to keep out unauthorized or unprotected personnel.
Stay upwind of spilled material.
Wear appropriate personal protective equipment during all clean-up activities. See Section 8 for more information.
Avoid inhalation and direct contact.

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All clean-up personnel must be properly trained.

- **Environmental Precautions:**

Keep spilled material out of sewage/drainage systems and waterways.

This product contains a U.S. EPA Reportable Quantity (RQ) substance. If amounts exceeding the Reportable Quantity are released, notification of the National Response Center +1 (800) 424-8802 is required. See Section 15 for more information.

- **Methods for Containment and Clean-Up:**

Ensure adequate ventilation.

Secure the source of the leak if conditions are safe.

Collect using an appropriate absorbent material such as clay or sand.

Place waste in an appropriate container for disposal.

Use care during clean-up to avoid exposure to the material and injury from broken containers.

7: Handling and Storage

- **Precautions for Safe Handling:**

Use only in well ventilated areas.

Avoid inhalation and direct contact.

- **Protection Against Fires and Explosions:**

Keep away from heat, sparks, open flames and hot surfaces. No smoking.

Take precautions against static discharge.

Transfer and store in properly bonded and grounded containers.

Use spark and explosion-proof tools and equipment.

Container headspace may contain flammable vapors.

- **Conditions for Safe Storage:**

Store in closed, properly labeled containers.

Protect containers from heat, physical damage, ignition sources and incompatible materials.

Have emergency equipment for fires and spills readily available.

- **Additional Information:**

If you do not understand the hazards or safety precautions described in this data sheet, contact your supervisor or safety administrator before handling this product.

8: Exposure Controls/Personal Protection

- **Occupational Exposure Limits:**

107-06-2 1,2-dichloroethane

PEL (USA) Eight-Hour Value: 50 ppm
 Ceiling Limit Value: 100; 200* ppm
 *5-min peak in any 3 hrs

REL (USA) Short-Term Value: 8 mg/m³, 2 ppm
 Eight-Hour Value: 4 mg/m³, 1 ppm
 See Pocket Guide Apps. A and C

TLV (USA) Eight-Hour Value: 40 mg/m³, 10 ppm

EL (Canada) Short-Term Value: 2 ppm
 Eight-Hour Value: 1 ppm
 IARC 2B

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EV (Canada) Eight-Hour Value: 40 mg/m³, 10 ppmWEL (Great Britain) Eight-Hour Value: 21 mg/m³, 5 ppm
Carc; Sk

- **Exposure Controls:**

Use local exhaust ventilation to control vapors.
Check ventilation for proper operation before starting work.
Ensure emergency eyewash and shower facilities are available.

- **General Protective and Hygienic Measures:**

Wash thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Follow all safety precautions, posted signs and warnings.
Do not inhale gases / fumes / aerosols.
Avoid contact with the eyes and skin.

- **Respiratory Protection:**

An industrial hygiene risk assessment is required to determine appropriate respiratory protection.
An air-purifying respirator may be appropriate under limited exposure conditions.
Perform a respirator fit/seal check after donning.
Protection provided by air-purifying respirators is limited.
Wear a self-contained breathing apparatus (SCBA) if there is a potential for uncontrolled release, exposure levels are not known, or in other circumstances where air-purifying respirators may not provide adequate protection.

- **Hand Protection:**



Chemical resistant gloves.

Work gloves may be worn over chemical resistant gloves.
Wear a second pair of chemical resistant gloves for added protection.
Tape gloves to coveralls or suit, if worn.
Use caution when removing gloves to avoid exposure to hazardous chemicals.

- **Eye/Face Protection:**



Safety glasses with side shields.

Splash goggles/mono-goggles recommended during tasks with high potential for exposure.

- **Body Protection:**

Fire resistant clothing (FRC).
Lab coat recommended for small scale operations.
Tasks with a high probability for splashing or skin contact may require:
Chemical resistant coveralls or apron.
Heavy duty chemical resistant boots.

- **Additional Information:**

If unusual exposures are expected, an industrial hygiene review of work practices, engineering controls and personal protective equipment is recommended.

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9: Physical/Chemical Properties

- **Form:** Oily
- **Color:** Colorless
- **Odor:** Like chlorine
- **pH Value:** Not determined.
- **Melting Point:** -35.5 °C (-32 °F)
- **Boiling Point:** 84 °C (183 °F)
- **Flash Point:** 13 °C (55 °F)
- **Autoignition Temperature:** 440 °C (824 °F)
- **Lower Explosive Limit (LEL):** 6.2 Vol %
- **Upper Explosive Limit (UEL):** 16 Vol %
- **Vapor Pressure at 20 °C (68 °F):** 87 hPa (65 mm Hg)
- **Density at 20 °C (68 °F):** 1.25 g/cm³ (10.431 lbs/gal)
- **Evaporation Rate:** Not determined.
- **Solubility in Water at 20 °C (68 °F):** 8 g/l
- **Partition Coefficient (n-octanol/water):** Not determined.
- **Dynamic Viscosity at 20 °C (68 °F):** 0.8 mPas

10: Stability and Reactivity

- **Chemical Stability/Reactivity:** Stable if used and stored according to the specifications listed below.
- **Thermal Decomposition/Conditions to be Avoided:**
Keep away from heat, sparks and open flames.
Keep away from incompatible materials.
- **Possibility of Hazardous Reactions/Incompatible Materials:**
Keep away from strong acids and bases.
Keep away from strong oxidizers.
- **Hazardous Decomposition Products:** No data available.

11: Toxicological Information

- **Acute Toxicity:**
Adverse nervous system effects.
Harmful if swallowed.
Toxic if inhaled.
- **Relevant LD/LC50 Values:**
107-06-2 1,2-dichloroethane
Oral LD50 670 mg/kg (rat)
Dermal LD50 2800 mg/kg (rat)

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- **Skin Irritation:**
Causes skin irritation.
Causes skin irritation.
 - **Eye Irritation:**
Causes serious eye irritation.
Causes serious eye irritation.
 - **Respiratory Irritation:** May cause respiratory irritation.
 - **Sensitization/Allergic Reaction:** No data available.
 - **Subchronic/Chronic Toxicity:**
Adverse liver effects.
Adverse kidney effects.
 - **Additional Toxicological Information:**
May cause genetic defects.
May cause drowsiness or dizziness.
 - **Substances Classified by IARC (International Agency for Research on Cancer):**
107-06-2 1,2-dichloroethane: 2B
 - **Substances Classified by NTP (National Toxicology Program):**
107-06-2 1,2-dichloroethane: R
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12: Ecological Information

- **Aquatic Toxicity:** No data available.
 - **Persistence and Degradability:** No data available.
 - **Bioaccumulative Potential:** No data available.
-

13: Disposal Considerations

- **Disposal Instructions:**
Keep spilled material out of sewage/drainage systems and waterways.
Waste materials may be hazardous due to the low flashpoint.
Maximize product recovery for reuse or recycling.
Dispose of waste in accordance with applicable laws and regulations.
 - **Additional Information:**
It is the responsibility of the product user to determine at the time of disposal whether a material containing or derived from this product should be classified as hazardous waste.
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* 14: Transport Information

- **UN Number:**
- **DOT, ADR, IMDG, IATA** UN1184

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Product Name: Ethylene Dichloride

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- **UN Proper Shipping Name:**

- **DOT:** Ethylene dichloride
- **ADR:** 1184 Ethylene dichloride
- **IMDG, IATA** ETHYLENE DICHLORIDE

- **Transport Hazard Class(es):**

- **DOT:**



- **Class:** 3 Flammable liquids
- **Label:** 3, 6.1
- **ADR:**



- **Class:** 3 Flammable liquids
- **Label:** 3+6.1
- **IMDG:**



- **Class:** 3 Flammable liquids
- **Label:** 3/6.1
- **IATA:**



- **Class:** 3 Flammable liquids
- **Label:** 3 (6.1)

- **Packing Group:**

- **DOT, ADR, IMDG, IATA** II

- **Environmental Hazards:** Not applicable.

- **Marine Pollutant:** No

- **Special Precautions:** Warning: Flammable liquids

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Product Name: Ethylene Dichloride

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- **Danger Code (Kemler):** 336
- **EMS Number:** F-E,S-D
- **Segregation Groups:** Liquid halogenated hydrocarbons

- **Additional Information:**
- **DOT:**
- **Quantity Limitations:** On passenger aircraft/rail: 1 L
On cargo aircraft only: 60 L
- **Remarks:** Shippers must consult transportation regulations for packaging instructions, quantity limitations and other regulatory information applicable to the desired mode of transport.

This product contains a U.S. EPA Reportable Quantity (RQ) substance. If amounts exceeding the Reportable Quantity are released, notification of the National Response Center +1 (800) 424-8802 is required. See Section 15 for more information.
- **ADR:**
- **Excepted Quantities (EQ):** Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml
- **Tunnel Restriction Code:** D/E
- **IMDG:**
- **Limited Quantities (LQ):** 1L
- **Excepted Quantities (EQ):** Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml
- **UN "Model Regulation":** UN 1184 ETHYLENE DICHLORIDE, 3 (6.1), II

15: Regulatory Information

- **U.S. Superfund Amendments & Reauthorization Act (SARA) 355 (Extremely Hazardous Substances):**
Substance is not listed.
- **U.S. Superfund Amendments & Reauthorization Act (SARA) 313 (Specific Toxic Chemical Listings):**
Substance is listed.
- **U.S. Environmental Protection Agency Reportable Quantity:**
107-06-2 1,2-dichloroethane: 100 lbs.
- **U.S. Toxic Substances Control Act (TSCA):**
Substance is listed.
- **California Proposition 65 Carcinogens:**
Substance is listed.
- **U.S. EPA (Environmental Protection Agency) Carcinogens:**
107-06-2 1,2-dichloroethane: B2

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· ACGIH (American Conference of Governmental Industrial Hygienists) Carcinogens:

107-06-2 1,2-dichloroethane: A4

· U.S. NIOSH (National Institute for Occupational Safety and Health) Carcinogens:

Substance is listed.

· Canadian Domestic Substances List (DSL):

Substance is listed.

· Canadian Ingredient Disclosure List (limit 0.1%)

Substance is not listed.

· Canadian Ingredient Disclosure List (limit 1%):

Substance is listed.

· Hazard Pictograms:



GHS02 GHS06 GHS08

· Signal Word: DANGER

· Hazard Statements:

H225 Highly flammable liquid and vapor.
 H302 Harmful if swallowed.
 H331 Toxic if inhaled.
 H315 Causes skin irritation.
 H319 Causes serious eye irritation.
 H350 May cause cancer.
 H335 May cause respiratory irritation.

· Precautionary Statements:

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
 P241 Use explosion-proof electrical/ventilating/lighting/equipment.
 P261 Avoid breathing mist/vapors/spray.
 P303+P361+P353 If on skin (or hair): Immediately remove all contaminated clothing. Rinse skin with water/shower.
 P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P309 If exposed or if you feel unwell:
 P310 Immediately call a doctor.
 P501 Dispose of contents/container in accordance with local regulations.

· Directive 2012/18/EU Major Accident Hazards Involving Dangerous Substances:

· Annex 1 Named Dangerous Substances: Substance is not listed.

· Substances of Very High Concern (REACH Article 57):

107-06-2 1,2-dichloroethane

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16: Other Information

This information is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of Formosa Plastics Corporation, U.S.A. at the time it was prepared. Formosa Plastics Corporation, U.S.A. does not assume any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, Formosa Plastics Corporation, U.S.A. and its subsidiaries cannot guarantee that these are the only hazards that exist. Formosa Plastics Corporation, U.S.A. assumes no legal responsibility for loss, damage or expense arising out of, or in any way connected with, the handling, storage, use or disposal of this product.

- **Department Issuing Safety Data Sheet:** Corporate Environment, Health & Safety
- **Date of Preparation/Last Revision:** 06/23/2015 (mm/dd/yyyy)

- **Sources & References:**

This Safety Data Sheet conforms to regulation 1907/2006/EC (REACH). This product has been classified in accordance with European CLP regulations (1272/2008/EC) and the U.S. Hazard Communication standard (29 CFR 1910.1200).

* - Indicates that data has been updated from the previous version.