

Safety Data Sheet

according to OSHA HCS, NOM 018-STPS-2015, HPR Schedule 1

Date Printed: 10/13/2022

Version 5

Revision Date: 06/13/2022

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

· **Product Identifier:** Ethylene Dichloride

· **Synonyms:** 1,2-dichloroethane, EDC

· **CAS Number:**
107-06-2

· **Product Application:**
Various industrial uses.
Raw material for plastics.

· **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

· **Business Division:** Chlor-Alkali

· **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**

· **Classification of the Substance or Mixture:**

Flammable Liquids 2

H225 Highly flammable liquid and vapor.

Acute Toxicity - Oral 4

H302 Harmful if swallowed.

Skin Irritation 2

H315 Causes skin irritation.

Eye Irritation 2A

H319 Causes serious eye irritation.

Carcinogenicity 1B

H350 May cause cancer.

Specific Target Organ Toxicity - Single Exposure 3 H335 May cause respiratory irritation.

· **Hazard Pictograms:**



GHS02 GHS07 GHS08

· **Signal Word:** DANGER

· **Hazard Statements:**

H225 Highly flammable liquid and vapor.
H302 Harmful if swallowed.

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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.
 P240 Ground/bond container and receiving equipment.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
 P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P315 Get immediate medical attention.
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.
 P501 Dispose of contents/container in accordance with local regulations.

· **Additional Precautionary Statements for U.S.A. and Canada:**

P201 Obtain special instructions before use.
 P202 Do not handle until all safety precautions have been read and understood.
 P241 Use explosion-proof electrical/ventilating/lighting/equipment.
 P242 Use only non-sparking tools.
 P243 Take precautionary measures against static discharge.
 P260 Do not breathe vapors.
 P264 Wash thoroughly after handling
 P271 Use only outdoors or in a well-ventilated area.
 P273 Avoid release to the environment.
 P321 Specific treatment (see Section 4 of SDS).
 P361+P364 Immediately remove contaminated clothing and wash before reuse.
 P370+378 In case of fire: Use for extinction: CO₂, sand, extinguishing powder.
 P405 Store locked up.

· **NFPA Ratings (scale 0 - 4):**



· **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

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* 4 First Aid Measures

• General information:

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

• 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.

• Most Important Symptoms and Effects: No further relevant information available.

* 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.

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* 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.

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.

• **Reference to Other Sections:**

See Section 7 for information on safe handling.

See Section 8 for information on personal protective equipment.

See Section 13 for disposal information.

* 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, Including Any Incompatibilities:**

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.

• **Specific End Uses:**

Various industrial uses.

Various industrial uses.

Raw material for plastics.

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- **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

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

EV (Canada) Eight-Hour Value: 40 mg/m³, 10 ppm

VLE (Mexico) Eight-Hour Value: 10 ppm
 A4

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: 10 ppm
 A4

- **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.

- **Personal Protective Equipment:**

- **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.

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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:**

Flame 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.

* 9 Physical/Chemical Properties

- **Information on Basic Physical and Chemical Properties**

- **Appearance:**

<u>Physical State:</u>	Oily
<u>Color:</u>	Colorless
· <u>Odor:</u>	Like chlorine
· <u>Odor Threshold:</u>	Not determined.
· <u>pH:</u>	Not determined.
· <u>Melting Point/Freezing Point:</u>	-35.5 °C (-31.9 °F)
· <u>Boiling Point:</u>	84 °C (183.2 °F)
· <u>Flash Point:</u>	13 °C (55.4 °F)
· <u>Flammability (solid, gaseous):</u>	Not applicable.
· <u>Autoignition Temperature:</u>	440 °C (824 °F)
· <u>Decomposition Temperature:</u>	Not determined.
· <u>Auto-Ignition Temperature:</u>	Not determined.
· <u>Explosion Limits:</u>	
<u>Lower Explosive Limit (LEL):</u>	6.2 Vol %
<u>Upper Explosive Limit (UEL):</u>	16 Vol %
· <u>Vapor Pressure at 20 °C (68 °F):</u>	87 hPa (65.3 mm Hg)
· <u>Density at 20 °C (68 °F):</u>	1.25 g/cm ³ (10.43 lbs/gal)

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- **Vapor Density:** Not determined.
 - **Evaporation Rate:** Not determined.
 - **Solubility:**
 - Water at 20 °C (68 °F):** 8 g/l
 - **Partition Coefficient (n-octanol/water):** Not determined.
 - **Viscosity:** Not determined.
 - **Dynamic Viscosity at 20 °C (68 °F):** 0.8 mPas
 - **Other Information:** No further relevant information available.
-

* 10 Stability and Reactivity

- **Reactivity:** No further relevant information available.
 - **Chemical Stability:** Stable if used and stored according to the specifications listed below.
 - **Conditions to Avoid:**
 - 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.
 - Harmful if swallowed.
- **Relevant LD/LC50 Values:**
 - 107-06-2 1,2-dichloroethane**
 - Oral LD50 670 mg/kg (rat)
 - Dermal LD50 2,800 mg/kg (rat)
- **Skin Irritation:** Causes skin irritation.
- **Eye Irritation:** Causes serious eye irritation.
- **Respiratory Irritation:** May cause respiratory irritation.
- **Respiratory or Skin Sensitization:** No data available.
- **Subacute to Chronic Toxicity:**
 - Adverse liver effects.
 - Adverse kidney effects.
- **Additional Toxicological Information**
 - May cause genetic defects.

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May cause drowsiness or dizziness.

- **Carcinogen Classification:**

- **Substances Classified by IARC (International Agency for Research on Cancer):**

: 2B

- **Substances Classified by NTP (National Toxicology Program):**

: R

- **Information on Other Hazards:**

- **Endocrine Disrupting Properties:**

Substance is not listed.

* 12 Ecological Information

- **Aquatic Toxicity:** No data available.

- **Persistence and Degradability:** No data available.

- **Bioaccumulative Potential:** No data available.

- **Mobility in Soil:** No data available.

- **Endocrine Disrupting Properties:**

The product does not contain substances with endocrine disrupting properties.

* 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.

* 14 Transport Information

- **UN Number:**

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

UN1184

- **UN Proper Shipping Name:**

- **DOT:**

Ethylene dichloride

- **ADR:**

1184 ETHYLENE DICHLORIDE

- **IMDG, IATA**

ETHYLENE DICHLORIDE

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· **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

· **Danger Code (Kemler):** 336

· **EMS Number:** F-E,S-D

· **Segregation Groups:** Liquid halogenated hydrocarbons

· **Stowage Category** B

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· Stowage Code	SW2 Clear of living quarters.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:	Not applicable.

· 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

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **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:**
: 100 lbs.
- **U.S. Toxic Substances Control Act (TSCA):**
: ACTIVE
- **Hazardous Air Pollutants**
Substance is listed.
- **California Proposition 65:**
- **California Proposition 65 Carcinogens:**
Substance is listed.

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· New Jersey Right-to-Know List:

Substance is listed.

· New Jersey Special Hazardous Substance List:

: CA, MU, F3

· Pennsylvania Right-to-Know List:

Substance is listed.

· Pennsylvania Special Hazardous Substance List:

: ES

· Carcinogen Categories:

· U.S. EPA (Environmental Protection Agency) Carcinogens:

: B2

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

: A4

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

Substance is listed.

· Canadian Substance Listings:

· Canadian Domestic Substances List (DSL):

Substance is listed.

· Canadian Non-Domestic Substances List (NDSL)

Substance is not listed.

· Canadian Ingredient Disclosure List (limit 0.1%)

Substance is not listed.

· Canadian Ingredient Disclosure List (limit 1%):

Substance is listed.

· GHS Label Elements:

The substance is classified and labeled according to the Globally Harmonized System (GHS).

· Hazard Pictograms:


GHS02 GHS07 GHS08

· Signal Word: DANGER

· Hazard Statements:

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

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H335 May cause respiratory irritation.

- **Precautionary Statements:**

- P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- P240 Ground/bond container and receiving equipment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P315 Get immediate medical attention.
- P403+P233 Store in a well-ventilated place. Keep container tightly closed.
- P501 Dispose of contents/container in accordance with local regulations.

- **Additional Precautionary Statements:** See Section 2.

- **Chemical Safety Assessment:** A Chemical Safety Assessment has not been carried out.

*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

- **Contact:** msds@fpcusa.com

- **Abbreviations & Acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 DOT: US Department of Transportation
 IATA: International Air Transport Association
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 NFPA: National Fire Protection Association (USA)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 NIOSH: National Institute for Occupational Safety
 TLV: Threshold Limit Value
 PEL: Permissible Exposure Limit
 REL: Recommended Exposure Limit
 Flammable Liquids 2: Flammable liquids – Category 2
 Acute Toxicity - Oral 4: Acute toxicity – Category 4
 Skin Irritation 2: Skin corrosion/irritation – Category 2
 Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A
 Carcinogenicity 1B: Carcinogenicity – Category 1B
 Specific Target Organ Toxicity - Single Exposure 3: Specific target organ toxicity (single exposure) – Category 3

- **Sources & References:** * - Indicates that data has been updated from the previous version.
