1 Identification of substance:

Product details:

Product name: Ethylene carbonate

Stock number: A15735

Manufacturer/Supplier:

Alfa Aesar, A Johnson Matthey Company
Johnson Matthey Catalog Company, Inc.
30 Bond Street
Ward Hill, MA 01835-8099
Emergency Phone: (978) 521-6300
CHEMTREC: (800) 424-9300
Web Site: www.alfa.com

Information Department: Health, Safety and Environmental Department

Emergency information:

During normal hours the Health, Safety and Environmental Department. After normal hours call Chemtrec at (800) 424-9300.

2 Composition/Data on components:

Chemical characterization:

Description: (CAS#)

Ethylene carbonate (CAS# 96-49-1); 100%

Identification number(s):

EINECS Number: 202-510-0

3 Hazards identification
- **Hazard description**: Xi Irritant

- **Information pertaining to particular dangers for man and environment**
  
  R 36 Irritating to eyes.

- **Classification system**

- **HMIS ratings (scale 0-4)**

  (Hazardous Materials Identification System)
  
  Health (acute effects) = 1
  Flammability = 1
  Reactivity = 1

- **4 First aid measures**

  - **After inhalation**
    
    Supply fresh air. If required, provide artificial respiration.
    Keep patient warm.
    Seek immediate medical advice.

  - **After skin contact**
    
    Immediately wash with water and soap and rinse thoroughly.
    Seek immediate medical advice.

  - **After eye contact**
    
    Rinse opened eye for several minutes under running water. Then consult a doctor.

  - **After swallowing** Seek immediate medical advice.

- **5 Fire fighting measures**

  - **Suitable extinguishing agents**
    
    Carbon dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

  - **Protective equipment**:
    
    Wear self-contained respirator.
    Wear fully protective impervious suit.

- **6 Accidental release measures**

  - **Person-related safety precautions**:
    
    Wear protective equipment. Keep unprotected persons away.
    Ensure adequate ventilation

  - **Measures for environmental protection**:
Do not allow material to be released to the environment without proper governmental permits.

- Measures for cleaning/collecting: Pick up mechanically.

- Additional information:

  See Section 7 for information on safe handling
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.

7 Handling and storage

- Handling

- Information for safe handling:

  Keep container tightly sealed.
  Store in cool, dry place in tightly closed containers.
  Ensure good ventilation at the workplace.

- Information about protection against explosions and fires:

  No special measures required.

- Storage

- Requirements to be met by storerooms and receptacles:

  No special requirements.

- Information about storage in one common storage facility:

  Store away from oxidizing agents.

- Further information about storage conditions:

  Keep container tightly sealed.
  Store in cool, dry conditions in well sealed containers.

8 Exposure controls and personal protection

- Additional information about design of technical systems:

  Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Components with limit values that require monitoring at the workplace:
Not required.

- Additional information: No data
• Personal protective equipment

• General protective and hygienic measures

The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Remove all soiled and contaminated clothing immediately.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.

• Breathing equipment:

Use suitable respirator when high concentrations are present.

• Protection of hands: Impervious gloves

• Eye protection: Safety glasses

• Body protection: Protective work clothing.

• 9 Physical and chemical properties:

• General Information

• Form: Solidified mass

• Color: Colorless

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<th>Value/Range</th>
<th>Unit</th>
<th>Method</th>
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• Change in condition

• Melting point/Melting range: 36.4 °C

• Boiling point/Boiling range: 248 °C

• Sublimation temperature / start: Not determined

• Flash point: 160 °C

• Ignition temperature: 465 °C

• Decomposition temperature: Not determined
• Danger of explosion:
  Product does not present an explosion hazard.

• Explosion limits:
  • Lower: Not determined
  • Upper: Not determined

• Vapor pressure: at 36 °C 0.027 hPa

• Density: at 20 °C 1.321 g/cm²

• Solubility in / Miscibility with
  • Water: at 20 °C 214 g/l

10 Stability and reactivity

• Thermal decomposition / conditions to be avoided:
  Decomposition will not occur if used and stored according to specifications.

• Materials to be avoided:
  Oxidizing agents
  Acids
  Bases
  Dangerous reactions No dangerous reactions known

• Dangerous products of decomposition: Carbon monoxide and carbon dioxide

11 Toxicological information

• Acute toxicity:
  LD/LC50 values that are relevant for classification:

  Oral: LD50: 10000 mg/kg (rat)
  Dermal: LD50: >3000 mg/kg (rbt)

• Primary irritant effect:

  • on the skin: Irritant to skin and mucous membranes.
  • on the eye: Irritating effect.
Sensitization: No sensitizing effects known.

Subacute to chronic toxicity:
Ethylene carbonate is irritating to the skin, eyes, mucous membranes and upper respiratory tract.

Additional toxicological information:
To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.
No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

12 Ecological information:

General notes:
Do not allow material to be released to the environment without proper governmental permits.

13 Disposal considerations

Product:

Recommendation
Consult state, local or national regulations to ensure proper disposal.

Uncleaned packagings:

Recommendation:
Disposal must be made according to official regulations.

Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information
Not a hazardous material for transportation.

DOT regulations:

Hazard class: None

Land transport ADR/RID (cross-border)

ADR/RID class: None
- Maritime transport IMDG:
  - IMDG Class: None

- Air transport ICAO-TI and IATA-DGR:
  - ICAO/IATA Class: None

- Transport/Additional information:
  Not dangerous according to the above specifications.

- 15 Regulations

- Product related hazard informations:

- Hazard symbols: Xi Irritant

- Risk phrases: 36 Irritating to eyes.

- Safety phrases:
  26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
  37/39 Wear suitable gloves and eye/face protection.

- National regulations

  All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.

- Information about limitation of use:

  For use only by technically qualified individuals.

- 16 Other information:

  Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the
responsibility of the user.

- **Department issuing MSDS:** Health, Safety and Environmental Department.

- **Contact:** Darrell R. Sanders