SAFETY DATA SHEET
Propylene carbonate

SECTION 1: Identification

1.1 Product identifier
Trade name: Propylene carbonate
REACH registration No.: 01-2119537232-48-0006
CAS-Number: 108-32-7
EC-number: 203-572-1
EU-number: 607-194-00-1

1.2 Relevant identified uses of the substance or mixture and uses advised against
General use: Chemical basic material.
Identified uses: Industrial use:
1. Distribution
2. Processing aid
Professional use:
1. Processing aid
Consumer use:
1. Service life of substances in articles

1.3 Details of the supplier
Company information: Star Asia (Far East) Co., Ltd.
972/1 3rd Floor, Vorasubin Building
Soi Rama 9 Hospital, Rama 9 Road, Bang kapi, Huai Khwang, Bangkok 10320 Thailand
Tel no. : + 6 6 – 2 – 2 4 6 2 0 5 1 – 2
Fax no. : + 6 6 – 2 – 2 4 6 2 0 5 3
Website : www.starasiafareast.com
Code : PROPYLENE CARBONATE-CHI-ZSC

1.4 Emergency telephone number
+1-206-275 3992

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Classification according to EC regulation 1272/2008 (CLP)
Eye Irrit. 2; H319 Causes serious eye irritation.

Classification according to directive 67/548/EEC
Xi; R36 Imitating to eyes.
2.2 Label elements
Labelling (CLP)

Signal word:
Warning

Hazard statements:  
H319  Causes serious eye irritation.

Safety precautions:  
P264  Wash hands and face thoroughly after handling. 
P280  Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338  IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313  If eye irritation persists: Get medical advice/attention.

2.3 Other hazards
No risks worthy of mention.

SECTION 3: Composition / information on ingredients

3.1 Substances
Chemical characterization:  
C4 H6 O3  Propylene carbonate

CAS-Number: 108-32-7
EC-number: 203-572-1
EU-number: 607-194-00-1
RTECS-Number: FF9650000

SECTION 4: First aid measures

4.1 Description of first aid measures
In case of inhalation:  Move victim to fresh air; if necessary, provide artificial respiration or oxygen. Seek medical treatment in case of troubles.

In case of skin contact:  Remove residues with soap and water. Seek medical treatment in case of troubles.

After eye contact:  Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist.

After swallowing:  Never give anything by mouth to an unconscious person. Rinse mouth with water. Seek medical treatment in case of troubles.

4.2 Most important symptoms and effects, both acute and delayed  
Nausea, vomiting, headache, central nervous system depression.

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:
Water fog, foam, extinguishing powder, carbon dioxide.
Extinguishing media which must not be used for safety reasons:
High power water jet

5.2 Special hazards arising from the substance or mixture
In case of fire may be liberated: Carbon monoxide and carbon dioxide.

5.3 Advice for firefighters
Special protective equipment for firefighters:
Wear self-contained breathing apparatus. Wear suitable protective clothing.
Additional information: Hazchem-Code: -
Move container away or cool with water from a protected position.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Wear personal protection equipment. Provide adequate ventilation. Avoid contact with the substance. Do not breathe vapours.

6.2 Environmental precautions
Do not allow to penetrate into soil, waterbodies or drains.

6.3 Methods and material for containment and cleaning up
Soak up inert absorbent and dispose as waste requiring special attention. Collect in closed and suitable containers for disposal.

6.4 Reference to other sections
Refer additionally to section 8 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Advice on safe handling: Provide adequate ventilation, and local exhaust as needed. Avoid contact with skin and eyes. Do not breathe vapours.

7.2 Conditions for safe storage, including any incompatibilities
Requirements for storerooms and containers:
Keep container dry, tightly closed and store at cool and aired place. Protect from moisture contamination. Protect from sunlight.
Hints on joint storage:
Do not store together with food.
Storage class:
10 = Combustible liquids, unless storage class 3

7.3 Specific end use(s)
No information available.
SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Additional information: Contains no substances with occupational exposure limit values.

DNEL/DMEL:
- Systemic effects:
  - DNEL long-term, workers, dermal: 50 mg/kg bw/d
  - DNEL long-term, workers, inhalative: 176 mg/m³
  - Local effects:
  - DNEL long-term, workers, inhalative: 20 mg/m³
- Systemic effects:
  - DNEL long-term, consumer, dermal: 25 mg/kg bw/d
  - DNEL long-term, consumer, inhalative: 43.5 mg/m³
  - DNEL long-term, consumer, oral: 25 mg/kg bw/d
  - Local effects:
  - DNEL long-term, consumer, inhalative: 10 mg/m³

PNEC:
- PNEC water (freshwater): 0.9 mg/L
- PNEC water (marine water): 0.09 mg/L
- PNEC water (intermittent release): 9 mg/L
- PNEC soil: 0.81 mg/kg dw
- PNEC sewage treatment plant: 7400 mg/L

8.2 Exposure controls

Provide for good ventilation or exhaust system or work with completely self-contained equipment. When vapours form: Withdraw by suction.

Personal protection equipment

Occupational exposure controls

Respiratory protection: If vapours form, use respiratory protection.
  - Use filter type A (= against vapours of organic substances) according to EN 14387.

Hand protection: Protective gloves according to EN 374.
  - Glove material: Nitrile rubber - Layer thickness: 0.11 mm.
  - Breakthrough time: >480 min.
  - Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Eye protection: Tightly sealed goggles according to EN 166.

Body protection: Wear suitable protective clothing.

General protection and hygiene measures:
- Take off contaminated clothing. Wash hands before breaks and after work. When using do not eat or drink. Safety shower and eye wash station should be easily accessible to the work area.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance: Physical state: liquid
  - Colour: colourless up to yellowish

Odour: fruity

Odour threshold: no data available
**9.2 Other information**

- **Ignition temperature:** 430 °C
- **Additional information:**
  - Molar mass: 102.09 g/mol
  - Relative vapour density at 20 °C (air=1): 3.52
  - Dissociation constant, pKₐ: 3.92

**SECTION 10: Stability and reactivity**

**10.1 Reactivity**

refer to 10.3

**10.2 Chemical stability**

Product is stable under normal storage conditions.

**10.3 Possibility of hazardous reactions**

No dangerous reactions are known.

**10.4 Conditions to avoid**

no data available

**10.5 Incompatible materials**

Strong oxidizing agents
10.6 Hazardous decomposition products
In case of fire may be liberated: Carbon monoxide and carbon dioxide.

Thermal decomposition: \( \geq 240^\circ C \)

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SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity:
- LD50 Rat, oral: \( > 5000 \) mg/kg (OECD 401)
- LD50 Rabbit, dermal: \( > 2000 \) mg/kg (OECD 402)

Toxicological effects:
- Acute toxicity (oral): Based on available data, the classification criteria are not met.
- Acute toxicity (dermal): Based on available data, the classification criteria are not met.
- Acute toxicity (inhalative): Lack of data.
- Skin corrosion/irritation: Based on available data, the classification criteria are not met.
  - Rabbit: Not an irritant (OECD 404).
- Eye damage/irritation: Eye Irrit. 2; H319 = Causes serious eye irritation.
  - Rabbit eye: irritant (OECD 405 (Draize)).
- Sensitisation to the respiratory tract: Lack of data.
- Skin sensitisation: Based on available data, the classification criteria are not met.
- Human: not sensitising.
- Germ cell mutagenicity/Genotoxicity: Based on available data, the classification criteria are not met.
  - In vitro mutagenicity:
    - OECD 471 (Ames test): negative
    - OECD 482 (Unscheduled DNA Synthesis (UDS)): negative
  - In vivo mutagenicity:
    - In micronucleus test (OECD 474): negative
- Carcinogenicity: Based on available data, the classification criteria are not met.
  - Not carcinogen (OECD 451).
- Reproductive toxicity: Based on available data, the classification criteria are not met.
  - NOAEL Rat, oral: 1000 mg/kg bw/d (OECD 414)
- Effects on or via lactation: Lack of data.
- Specific target organ toxicity (single exposure): Based on available data, the classification criteria are not met.
- Specific target organ toxicity (repeated exposure): Based on available data, the classification criteria are not met.
  - NOAEL Rat, oral: \( > 5000 \) mg/kg bw/d (OECD 408)
  - NOAEC Rat, inhalative: 100 mg/m\(^2\) (OECD 413)
- Aspiration hazard: Lack of data.
SECTION 12: Ecological information

12.1 Toxicity
Aquatic toxicity:
Acute (short-term) fish toxicity:
LC50 Cyprinus carpio (Common Carp): 1000 mg/L/96h (EU Method C.1).
Acute Daphnia toxicity:
EC50/LC50 Daphnia magna (Big water flea): 1000 mg/L/48h (OECD 202).
Algae toxicity:
EC50/LC50 Desmodesmus subspicatus (green algae): 900 mg/L/72h (OECD 201).
NOEC Desmodesmus subspicatus (green algae): 900 mg/L/72h (OECD 201).

12.2. Persistence and degradability
Further details:
Biodegradation:
Water: > 83%/28d (OECD 301B).
Product is readily biodegradable.

Effects in sewage plants: EC10 Pseudomonas putida: 7400 mg/L/16h (DIN 38412, Part 8).

12.3 Bioaccumulative potential
Partition coefficient: n-octanol/water:
at 20 °C: -0.5 log P(o/w)
Bio-accumulation is not to be expected (log P(o/w) <1).

12.4 Mobility in soil
Volatilisation:
Henry constant, 25 °C: H=0,00103 Pa* m³/mol.

12.5 Results of PBT and vPvB assessment
This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

12.6 Other adverse effects
General information: Do not allow to enter into ground-water, surface water or drains.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Product
Waste key number: 07 01 99 = Wastes from the manufacture, formulation, supply and use (MFSU) of basic organic chemicals: Wastes not otherwise specified
MFSU = manufacture, formulation, supply and use
Recommendation: Dispose of waste according to applicable legislation.

Contaminated packaging
Recommendation: Dispose of waste according to applicable legislation. Handle contaminated packages in the same way as the substance itself.
SECTION 14: Transport information

14.1 UN number
ADR/RID, IMDG, IATA: not applicable

14.2 UN proper shipping name
ADR/RID: Not restricted

14.3 Transport hazard class(es)
ADR/RID, IMDG, IATA: not applicable

14.4 Packing group
ADR/RID, IMDG, IATA: not applicable

14.5 Environmental hazards
Marine pollutant: Unknown

14.6 Special precautions for user
Sea transport (IMDG)
Remarks: not applicable

Air transport (IATA)
Remarks: Not applicable

No dangerous good in sense of these transport regulations.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
no data available

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations - Great Britain
Hazchem-Code: -

National regulations - EC member states
Labelling of packaging with <= 125mL content

Signal word: Warning
Hazard statements: not applicable
Safety precautions: not applicable
National regulations - USA

TSCA Inventory: listed
TSCA HPVC: not listed
Clean Air Act:
  SOCMI Chemical: yes

Hazard rating systems:
  NFPA Hazard Rating:
    Health: 1 (Slight)
    Fire: 1 (Slight)
    Reactivity: 0 (Minimal)

  HMIS Version III Rating:
    Health: 1 (Slight)
    Flammability: 1 (Slight)
    Physical Hazard: 0 (Minimal)
    Personal Protection: H

National regulations - Canada

  DSL: listed

15.2 Chemical Safety Assessment

  For this substance a chemical safety assessment has been carried out.

SECTION 16: Other information

Further information

For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

The information in this data sheet has been established to our best knowledge and was up-to-date at time of revision. It does not represent a guarantee for the properties of the product described in terms of the legal warranty regulations.

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