



Enabling Your Technology

**TRIALLYL CYANURATE**

Safety Data Sheet ENET4170

Date of issue: 09/20/2017

Version: 1.0

**SECTION 1: Identification****1.1. Identification**

Product name : TRIALLYL CYANURATE  
 Product code : ENET4170  
 Product form : Substance  
 Physical state : Solid  
 Formula : C<sub>12</sub>H<sub>15</sub>N<sub>3</sub>O<sub>3</sub>  
 Synonyms : 2,4,6-TRIALLYLOXYTRIAZINE  
 CYANURIC ACID TRIALLYL ESTER  
 2,4,6-TRIS(2-PROPEN-1-YLOXY)-1,3,5-TRIAZINE  
 Chemical family : ORGANIC ESTER

**1.2. Recommended use and restrictions on use**

Recommended use : Chemical intermediate

**1.3. Supplier****GELEST, INC.**

11 East Steel Road  
 Morrisville, PA 19067

**USA**

T 215-547-1015 - F 215-547-2484 - (M-F): 8:00 AM - 5:30 PM EST

[info@gelest.com](mailto:info@gelest.com) - [www.gelest.com](http://www.gelest.com)

**1.4. Emergency telephone number**

Emergency number : CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)

**SECTION 2: Hazard(s) identification****2.1. Classification of the substance or mixture****GHS-US classification**

Acute toxicity (oral) Category 4 H302 Harmful if swallowed  
 Hazardous to the aquatic environment - Acute Hazard Category 2 H401 Toxic to aquatic life  
 Hazardous to the aquatic environment - Chronic Hazard Category 2 H411 Toxic to aquatic life with long lasting effects  
 Full text of H statements : see section 16

**2.2. GHS Label elements, including precautionary statements****GHS US labeling**

Hazard pictograms (GHS US) :



Signal word (GHS US) : Warning  
 Hazard statements (GHS US) : H302 - Harmful if swallowed  
 H401 - Toxic to aquatic life  
 H411 - Toxic to aquatic life with long lasting effects  
 Precautionary statements (GHS US) : P264 - Wash hands thoroughly after handling.  
 P270 - Do not eat, drink or smoke when using this product.  
 P273 - Avoid release to the environment.  
 P330 - Rinse mouth.  
 P301+P312 - If swallowed: Call a doctor if you feel unwell  
 P391 - Collect spillage.  
 P501 - Dispose of contents/container to licensed waste disposal facility.

**2.3. Hazards not otherwise classified (HNOC)**

No additional information available

**2.4. Unknown acute toxicity (GHS US)**

Not applicable

**SECTION 3: Composition/Information on ingredients****3.1. Substances**

Substance type : Mono-constituent  
 Name : TRIALLYL CYANURATE

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## Safety Data Sheet

CAS-No. : 101-37-1

Name	Product identifier	%	GHS-US classification
Triallyl cyanurate	(CAS-No.) 101-37-1	95 - 100	Acute Tox. 4 (Oral), H302 Aquatic Acute 2, H401 Aquatic Chronic 2, H411

Full text of hazard classes and H-statements : see section 16

### 3.2. Mixtures

Not applicable

## SECTION 4: First-aid measures

### 4.1. Description of first aid measures

- First-aid measures general : Remove contaminated clothing and shoes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If possible show this sheet; if not available show packaging or label.
- First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, seek medical advice.
- First-aid measures after skin contact : Wash with plenty of soap and water. Get medical advice/attention.
- First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.
- First-aid measures after ingestion : Never give anything by mouth to an unconscious person. Get medical advice/attention.

### 4.2. Most important symptoms and effects (acute and delayed)

- Symptoms/effects after inhalation : May cause irritation to the respiratory tract.
- Symptoms/effects after skin contact : May cause skin irritation.
- Symptoms/effects after eye contact : May cause eye irritation.
- Symptoms/effects after ingestion : Harmful if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

### 4.3. Immediate medical attention and special treatment, if necessary

No additional information available

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media : Water spray. Foam. Carbon dioxide. Dry chemical.
- Unsuitable extinguishing media : None known.

### 5.2. Specific hazards arising from the chemical

- Fire hazard : Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame.

### 5.3. Special protective equipment and precautions for fire-fighters

- Firefighting instructions : Exercise caution when fighting any chemical fire. Use water spray to cool exposed surfaces.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Avoid all eye and skin contact and do not breathe vapor and mist.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

- Protective equipment : Wear protective equipment as described in Section 8.
- Emergency procedures : Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".

### 6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

### 6.3. Methods and material for containment and cleaning up

- For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
- Methods for cleaning up : Collect spillage. Sweep or shovel spills into appropriate container for disposal.

### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

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### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

- Precautions for safe handling : Avoid all eye and skin contact and do not breathe vapor and mist. Use only in well ventilated areas.
- Hygiene measures : Wash contaminated clothing before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

#### 7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Keep container tightly closed.
- Incompatible materials : Oxidizing agent.
- Storage area : Store in a well-ventilated place. Store away from heat.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

No additional information available

#### 8.2. Appropriate engineering controls

- Appropriate engineering controls : Provide local exhaust or general room ventilation.

#### 8.3. Individual protection measures/Personal protective equipment

##### Personal protective equipment:

Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

##### Hand protection:

Neoprene or nitrile rubber gloves

##### Eye protection:

Chemical goggles. Contact lenses should not be worn

##### Skin and body protection:

Wear suitable protective clothing

##### Respiratory protection:

Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. NIOSH-certified combination dust mask/acid gas (yellow cartridge) respirator.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

- Physical state : Solid
- Appearance : Solid.
- Molecular mass : 249.27 g/mol
- Color : White.
- Odor : alcohol-like.
- Odor threshold : No data available
- Refractive index : No data available
- pH : No data available
- Relative evaporation rate (butyl acetate=1) : No data available
- Melting point : 26 - 28 °C
- Freezing point : No data available
- Boiling point : 156 °C
- Flash point : 113 °C
- Auto-ignition temperature : No data available
- Decomposition temperature : No data available
- Flammability (solid, gas) : No data available
- Vapor pressure : < 1 mm Hg @ 20°C
- Relative vapor density at 20 °C : No data available
- Relative density : 1.11
- Solubility : Very slightly soluble.
- Log Pow : No data available

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Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosion limits	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Stable.

### 10.3. Possibility of hazardous reactions

Hazardous polymerization may occur.

### 10.4. Conditions to avoid

No additional information available

### 10.5. Incompatible materials

Oxidizing agent.

### 10.6. Hazardous decomposition products

Organic acid vapors.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

#### TRIALLYL CYANURATE (101-37-1)

ATE US (oral)	590 mg/kg body weight
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#### Triallyl cyanurate (101-37-1)

LD50 oral rat	590 mg/kg RTECS Number: XZ2080000
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LD50 dermal rabbit	8600 mg/kg
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LD50 intravenous mouse	180 mg/kg
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LC50 inhalation rat (mg/l)	> 333 mg/m <sup>3</sup> (Exposure time: 1 h)
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ATE US (oral)	590 mg/kg body weight
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ATE US (dermal)	8600 mg/kg body weight
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Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

None of the components in this product at concentrations >0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

Reproductive toxicity : Not classified

Specific target organ toxicity – single exposure : Not classified

Specific target organ toxicity – repeated exposure : Not classified

Aspiration hazard : Not classified

Symptoms/effects after inhalation : May cause irritation to the respiratory tract.

Symptoms/effects after skin contact : May cause skin irritation.

Symptoms/effects after eye contact : May cause eye irritation.

Symptoms/effects after ingestion : Harmful if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : Toxic to aquatic life. Toxic to aquatic life with long lasting effects.

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Triallyl cyanurate (101-37-1)	
LC50 fish 1	7.05 mg/l LC50 static test Danio rerio - Method: OECD TG 203
EC50 Daphnia 1	40 mg/l EC50 Immobilization Daphnia magna - Method: OECD TG 202
ErC50 (algae)	10.52 mg/l IC 50 Growth inhibition Desmodesmus subspicatus - End point: growth rate Method: OECD TG 201

### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

No additional information available

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

Other adverse effects : This substance may be hazardous to the environment.  
Effect on the ozone layer : No additional information available

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Sewage disposal recommendations : Do not dispose of waste into sewer.  
Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility.  
Ecology - waste materials : Avoid release to the environment.

## SECTION 14: Transport information

### 14.1. UN number

UN-No.(DOT) : 3077  
DOT NA no. UN3077

### 14.2. UN proper shipping name

Transport document description : UN3077 Environmentally hazardous substances, solid, n.o.s. (TRIALLYL CYANURATE), 9, III  
Proper Shipping Name (DOT) : Environmentally hazardous substances, solid, n.o.s.  
(TRIALLYL CYANURATE)  
Class (DOT) : 9 - Class 9 - Miscellaneous hazardous material 49 CFR 173.140  
Packing group (DOT) : III - Minor Danger  
Hazard labels (DOT) : 9 - Class 9 (Miscellaneous dangerous materials)



Dangerous for the environment : Yes  
Marine pollutant : Yes



DOT Packaging Non Bulk (49 CFR 173.xxx) : 213  
DOT Packaging Bulk (49 CFR 173.xxx) : 240  
DOT Packaging Exceptions (49 CFR 173.xxx) : 155  
DOT Symbols : G - Identifies PSN requiring a technical name

### 14.3. Additional information

Emergency Response Guide (ERG) Number : 171  
Other information : No supplementary information available.

### Transport by sea

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

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### Air transport

DOT Quantity Limitations Passenger aircraft/rail : No limit  
(49 CFR 173.27)

DOT Quantity Limitations Cargo aircraft only (49 : No limit  
CFR 175.75)

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### Triallyl cyanurate (101-37-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

### 15.2. International regulations

#### CANADA

#### Triallyl cyanurate (101-37-1)

Listed on the Canadian DSL (Domestic Substances List)

#### EU-Regulations

#### Triallyl cyanurate (101-37-1)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

#### National regulations

#### Triallyl cyanurate (101-37-1)

Listed on the AICS (Australian Inventory of Chemical Substances)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory  
Listed on the Korean ECL (Existing Chemicals List)  
Listed on NZIoC (New Zealand Inventory of Chemicals)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Listed on INSQ (Mexican National Inventory of Chemical Substances)

### 15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

## SECTION 16: Other information

Full text of H-phrases::

H302	Harmful if swallowed
H401	Toxic to aquatic life
H411	Toxic to aquatic life with long lasting effects

Abbreviations and acronyms

: Abbreviations: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal Concentration; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety and Health; IARC: International Agency for Research on Cancer; NTP: National Toxicology Program; HMIS: Hazardous Material Information System; CAS No.: Chemical Abstract Service Registration Number; EC No.: European Commission Registration Number; EC Index No.: European Commission Index Number; OECD: The Organisation for Economic Co-operation and Development; GHS: The Globally Harmonized System of Classification and Labelling; APF: Assigned Protection Factor.

### Hazard Rating

Health : 2 Moderate Hazard - Temporary or minor injury may occur  
Flammability : 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)  
Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Prepared by safety and environmental affairs.

Date of issue: 09/20/2017 Version: 1.0

SDS US (GHS HazCom 2012) - Custom

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## Safety Data Sheet

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According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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