### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier
- **Product form**: Substance
- **Physical state**: Solid
- **Substance name**: CARBOXYETHYLTRICHLORGERMANE
- **Product code**: GEC2262
- **Formula**: C₃H₅Cl₃GeO₂
- **Synonyms**: TRICHLORGERMYLPROPANOIC ACID
- **Chemical family**: ORGANOCHLORGERMANE

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

##### 1.2.1. Relevant identified uses
- **Use of the substance/mixture**: Chemical intermediate

##### 1.2.2. Uses advised against
- No additional information available

#### 1.3. Details of the supplier of the safety data sheet
- **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 - www.gelest.com

- **GELEST INC.**
  - Fritz-Klatte-Strasse 8
  - 65933 Frankfurt
  - Germany
  - T +49 (0) 69 3535106-500 - F +49 (0) 69 3535106-501 - (M-F): 8:00 AM - 4:00 PM
  - info@gelestde.com - www.gelestde.com

#### 1.4. Emergency telephone number
- **Emergency number**: CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture
- **Classification according to Regulation (EC) No. 1272/2008 [CLP]**
  - Skin corrosion/irritation, Category 1C: H314
  - Serious eye damage/eye irritation, Category 1: H318

**Adverse physicochemical, human health and environmental effects**
- No additional information available

#### 2.2. Label elements

**Labelling according to Regulation (EC) No. 1272/2008 [CLP]**
- **Hazard pictograms (CLP)**
  - GHS05

**Signal word (CLP)**: Danger
- **Hazard statements (CLP)**: H314 - Causes severe skin burns and eye damage.
- **Precautionary statements (CLP)**:
  - P280 - Wear protective gloves/protective clothing/eye protection/face protection.
  - P260 - Do not breathe dust.
  - P264 - Wash hands thoroughly after handling.
2.3. Other hazards

Other hazards not contributing to the classification: Hydrogen chloride may be formed by reaction with water and moisture in air. The US OSHA PEL (TWA) for hydrogen chloride is 5 ppm.

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type: Multi-constituent
Name: CARBOXYETHYLTRICHLOROGERMANE
CAS-No.: 15961-23-6
EC-No.: 240-096-3

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<th>%</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
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<td>(CAS-No.) 15961-23-6 (EC-No.) 240-096-3</td>
<td>95 - 100</td>
<td>Skin Corr. 1C, H314 Eye Dam. 1, H318</td>
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<tr>
<td>Other Organogermanes</td>
<td></td>
<td>&gt;= 0</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

Full text of 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 person to fresh air and keep comfortable for breathing. If you feel unwell, seek medical advice.

First-aid measures after skin contact: Wash with plenty of water/… Get immediate 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 immediate 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, both acute and delayed

Symptoms/effects after inhalation: May cause irritation to the respiratory tract.
Symptoms/effects after skin contact: Causes (severe) skin burns.
Symptoms/effects after eye contact: Causes serious eye damage.
Symptoms/effects after ingestion: May be harmful if swallowed.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Unsuitable extinguishing media: Do not use straight streams.

5.2. Special hazards arising from the substance or mixture

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

5.3. Advice for firefighters

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 contact with skin and eyes. Do not breathe dust.
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

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: Clean up any spills as soon as possible, using an absorbent material to collect it. Sweep or shovel spills into appropriate container for disposal.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling: Avoid contact with skin and eyes. Avoid dust formation. Do not breathe dust. Provide local exhaust or general room ventilation to minimize exposure to dust.

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. Store locked up.


Storage area: Store in a well-ventilated place. Store away from heat.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Appropriate engineering controls:

Provide local exhaust or general room ventilation.

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 or face shield. 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 organic vapor/acid gas (yellow cartridge) respirator.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Solid
**Appearance**  
Crystalline solid.

**Molecular mass**  
252.06 g/mol

**Colour**  
White.

**Odour**  
Characteristic.

**Odour threshold**  
No data available

**Refractive index**  
No additional information available

**pH**  
No data available

**Relative evaporation rate (butylacetate=1)**  
< 1

**Melting point**  
83 - 85 °C

**Freezing point**  
No data available

**Boiling point**  
> 200 °C

**Flash point**  
> 110 °C

**Auto-ignition temperature**  
No data available

**Decomposition temperature**  
No data available

**Flammability (solid, gas)**  
No data available

**Vapour pressure**  
< 1 mm Hg @ 25°C

**Relative vapour density at 20 °C**  
> 1

**Relative density**  
> 1

**Solubility**  
Slightly. Soluble in water.

**Log Pow**  
No data available

**Log Kow**  
No data available

**Viscosity, kinematic**  
No data available

**Viscosity, dynamic**  
No data available

**Explosive properties**  
No data available

**Oxidising properties**  
No data available

**Explosive limits**  
No data available

**SECTION 10: Stability and reactivity**

**10.1. Reactivity**  
No additional information available

**10.2. Chemical stability**  
Stable.

**10.3. Possibility of hazardous reactions**  
Contact with water or moisture slowly generates hydrogen chloride.

**10.4. Conditions to avoid**  
Heat. Open flame. Sparks.

**10.5. Incompatible materials**  

**10.6. Hazardous decomposition products**  

**SECTION 11: Toxicological information**

**11.1. Information on toxicological effects**

**Acute toxicity**  
Not classified

**Skin corrosion/irritation**  
Causes severe skin burns and eye damage.

**Serious eye damage/irritation**  
Causes serious eye damage.

**Respiratory or skin sensitisation**  
Not classified

**Germ cell mutagenicity**  
Not classified

**Carcinogenicity**  
Not classified

**Reproductive toxicity**  
Not classified

**STOT-single exposure**  
Not classified

**STOT-repeated exposure**  
Not classified

**Aspiration hazard**  
Not classified
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Symptoms/effects after inhalation: May cause irritation to the respiratory tract.
Symptoms/effects after skin contact: Causes (severe) skin burns.
Symptoms/effects after eye contact: Causes serious eye damage.
Symptoms/effects after ingestion: May be harmful if swallowed.
Reason for classification: Expert judgment

SECTION 12: Ecological information

12.1. Toxicity
Acute aquatic toxicity: Not classified
Chronic aquatic toxicity: Not classified

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. Results of PBT and vPvB assessment
No additional information available

12.6. Other adverse effects
Other adverse effects: This substance may be hazardous to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment 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
In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number
- UN-No. (ADR): 1759
- UN-No. (IMDG): 1759
- UN-No. (IATA): 1759
- UN-No. (ADN): 1759
- UN-No. (RID): 1759

14.2. UN proper shipping name
- Proper Shipping Name (ADR): CORROSIVE SOLID, N.O.S.
- Proper Shipping Name (IMDG): CORROSIVE SOLID, N.O.S.
- Proper Shipping Name (IATA): Corrosive solid, n.o.s.
- Proper Shipping Name (ADN): CORROSIVE SOLID, N.O.S.
- Proper Shipping Name (RID): CORROSIVE SOLID, N.O.S.
- Transport document description (ADR): UN 1759 CORROSIVE SOLID, N.O.S. (CARBOXYETHYLTRICHLOROGERMANE), 8, III, (E)
- Transport document description (IMDG): UN 1759 CORROSIVE SOLID, N.O.S. (CARBOXYETHYLTRICHLOROGERMANE), 8, III
- Transport document description (IATA): UN 1759 Corrosive solid, n.o.s. (CARBOXYETHYLTRICHLOROGERMANE), 8, III
- Transport document description (ADN): UN 1759 CORROSIVE SOLID, N.O.S. (CARBOXYETHYLTRICHLOROGERMANE), 8, III
- Transport document description (RID): UN 1759 CORROSIVE SOLID, N.O.S. (CARBOXYETHYLTRICHLOROGERMANE), 8, III

14.3. Transport hazard class(es)
- ADR: 8
- Danger labels (ADR): 8
CARBOXYETHYLTRICHLOROGERMANE
Safety Data Sheet

IMDG
Transport hazard class(es) (IMDG) : 8
Danger labels (IMDG) : 8

IATA
Transport hazard class(es) (IATA) : 8
Hazard labels (IATA) : 8

ADN
Transport hazard class(es) (ADN) : 8
Danger labels (ADN) : 8

RID
Transport hazard class(es) (RID) : 8
Danger labels (RID) : 8

14.4. Packing group
Packing group (ADR) : III
Packing group (IMDG) : III
Packing group (IATA) : III
Packing group (ADN) : III
Packing group (RID) : III

14.5. Environmental hazards
Dangerous for the environment : No
Marine pollutant : No
Other information : No supplementary information available

14.6. Special precautions for user

- Overland transport
Classification code (ADR) : C10
Special provisions (ADR) : 274
Limited quantities (ADR) : 5kg
Excepted quantities (ADR) : E1
Packing instructions (ADR) : P002, IBC08, LP02, R001
Mixed packing provisions (ADR) : MP10
Portable tank and bulk container instructions (ADR) : T1
Portable tank and bulk container special provisions (ADR) : TP33
Tank code (ADR) : SGAV, L4BN
Vehicle for tank carriage : AT
Transport category (ADR) : 3
Special provisions for carriage - Bulk (ADR) : VC1, VC2, AP7
Hazard identification number (Kemler No.) : 80
Orange plates :

Tunnel restriction code (ADR) : E
EAC code : 2X

- **Transport by sea**

Special provisions (IMDG) : 223, 274
Limited quantities (IMDG) : 5 kg
Excepted quantities (IMDG) : E1
Packing instructions (IMDG) : P002, LP02
IBC packing instructions (IMDG) : IBC08
IBC special provisions (IMDG) : B3
Tank instructions (IMDG) : T1
Tank special provisions (IMDG) : TP33
EmS-No. (Fire) : F-A
EmS-No. (Spillage) : S-B
Stowage category (IMDG) : A
Properties and observations (IMDG) : Causes burns to skin, eyes and mucous membranes.

- **Air transport**

PCA Excepted quantities (IATA) : E1
PCA Limited quantities (IATA) : Y845
PCA limited quantity max net quantity (IATA) : 5kg
PCA packing instructions (IATA) : 860
PCA max net quantity (IATA) : 25kg
CAO packing instructions (IATA) : 864
CAO max net quantity (IATA) : 100kg
Special provisions (IATA) : A3
ERG code (IATA) : 8L

- **Inland waterway transport**

Classification code (ADN) : C10
Special provisions (ADN) : 274
Limited quantities (ADN) : 5 kg
Excepted quantities (ADN) : E1
Equipment required (ADN) : PP, EP
Number of blue cones/lights (ADN) : 0

- **Rail transport**

Classification code (RID) : C10
Special provisions (RID) : 274
Limited quantities (RID) : 5kg
Excepted quantities (RID) : E1
Packing instructions (RID) : P002, IBC08, LP02, R001
Special packing provisions (RID) : B3
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Mixed packing provisions (RID) : MP10
Portable tank and bulk container instructions (RID) : T1
Portable tank and bulk container special provisions (RID) : TP33
Tank codes for RID tanks (RID) : SGAV, L4BN
Transport category (RID) : 3
Special provisions for carriage – Bulk (RID) : VC1, VC2, AP7
Colis express (express parcels) (RID) : CE11
Hazard identification number (RID) : 80

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code
Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations
No REACH Annex XVII restrictions
CARBOXYETHYLTRICHLOROGERMANE is not on the REACH Candidate List
CARBOXYETHYLTRICHLOROGERMANE is not on the REACH Annex XIV List

15.1.2. National regulations

Germany
12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands
SZW-list van kankerverwekkende stoffen : The substance is not listed
SZW-list van mutagene stoffen : The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed

Denmark
Danish National Regulations : Young people below the age of 18 years are not allowed to use the product

15.2. Chemical safety assessment
No additional information available

SECTION 16: Other information

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

Other information : Prepared by safety and environmental affairs.

Full text of H- and EUH-statements:

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<td>Eye Dam. 1</td>
<td>Serious eye damage/eye irritation, Category 1</td>
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<tr>
<td>Skin Corr. 1C</td>
<td>Skin corrosion/Irritation, Category 1C</td>
</tr>
<tr>
<td>H314</td>
<td>Causes severe skin burns and eye damage.</td>
</tr>
<tr>
<td>H318</td>
<td>Causes serious eye damage.</td>
</tr>
</tbody>
</table>
The information contained in this document has been gathered from reference materials and/or Gelest, Inc. test data and is to the best knowledge and belief of Gelest, Inc. accurate and reliable. Such information is offered solely for your consideration, investigation and verification. It is not suggested or guaranteed that the hazard precautions or procedures described are the only ones which exist. Gelest, Inc. makes no warranties, express or implied, with respect to the use of such information and assumes no responsibility therefore. Information on this safety data sheet is not intended to constitute a basis for product specifications.

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