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

1.1. Product identifier

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product form</td>
<td>Substance</td>
</tr>
<tr>
<td>Physical state</td>
<td>Solid</td>
</tr>
<tr>
<td>Substance name</td>
<td>1,2-BIS(CHLORODIMETHYLSILYL)ETHANE</td>
</tr>
<tr>
<td>Product code</td>
<td>SIB1042.0</td>
</tr>
<tr>
<td>Formula</td>
<td>C6H16Cl2Si2</td>
</tr>
<tr>
<td>Synonyms</td>
<td>TETRAMETHYLDICHLORODISILETHYLENE; ETHYLENEBIS(CHLORODIMETHYLSILANE)</td>
</tr>
<tr>
<td>Chemical family</td>
<td>ORGANOCHLOROSILANE</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
<th>H228 Flammable solids, Category 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin corrosion/irritation, Category 1B</td>
<td>H314</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation, Category 1</td>
<td>H318</td>
</tr>
<tr>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

<table>
<thead>
<tr>
<th>Labelling according to Regulation (EC) No. 1272/2008 [CLP]</th>
<th>Hazard pictograms (CLP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazard pictograms (CLP)</td>
<td>:</td>
</tr>
<tr>
<td>Signal word (CLP)</td>
<td>Danger</td>
</tr>
<tr>
<td>Hazard statements (CLP)</td>
<td>H228 - Flammable solid.</td>
</tr>
</tbody>
</table>
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Precautionary statements (CLP)
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P240 - Ground/bond container and receiving equipment.
- P260 - Do not breathe dust.
- P264 - Wash hands thoroughly after handling.

EUH-statements
- EUH014 - Reacts violently with water.

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: Mono-constituent
- Name: 1,2-BIS(CHLORODIMETHYLSILYL)ETHANE
- CAS-No.: 13528-93-3
- EC-No.: 236-871-0

3.2. Mixtures
Not applicable

SECTION 4: First aid measures
4.1. Description of first aid measures
- 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 if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed
- Symptoms/effects: Causes severe skin burns and eye damage.
- 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: Water.

5.2. Special hazards arising from the substance or mixture
- Fire hazard: Flammable solid. Irritating fumes of hydrogen chloride and organic acid vapors may develop when material is exposed to water or open flame.

5.3. Advice for firefighters
- Firefighting instructions: Use water spray to cool exposed surfaces. Exercise caution when fighting any chemical fire.
- 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

General measures
Eliminate ignition sources. Use special care to avoid static electric charges.

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
Sweep or shovel spills into appropriate container for disposal. Use only non-sparking tools.

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

Additional hazards when processed
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Precautions for safe handling
Avoid contact with skin and eyes. Do not breathe dust. Ground/bond container and receiving equipment. Provide local exhaust or general room ventilation to minimize exposure to dust. Avoid dust formation. Use only non-sparking tools.

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

Technical measures
Use explosion-proof electrical equipment.

Storage conditions
Keep container tightly closed. Store locked up.

Incompatible materials

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. 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 organic vapor/acid gas (yellow cartridge) respirator.
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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Solid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Solid</td>
</tr>
<tr>
<td>Molecular mass</td>
<td>215.27 g/mol</td>
</tr>
<tr>
<td>Colour</td>
<td>Off-white</td>
</tr>
<tr>
<td>Odour</td>
<td>Acrid</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>Refractive index</td>
<td>No additional information available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butylacetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>36 - 39 °C</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>198 - 199 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>40 °C</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Flammable solid</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapour density at 20 °C</td>
<td>&gt; 1</td>
</tr>
<tr>
<td>Relative density</td>
<td>0.99</td>
</tr>
<tr>
<td>Solubility</td>
<td>Reacts with water</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Log Kow</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>No data available</td>
</tr>
</tbody>
</table>

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 in sealed containers stored under a dry inert atmosphere.

10.3. Possibility of hazardous reactions

Reacts with water and moisture in air, liberating 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

<table>
<thead>
<tr>
<th>Effect</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Causes severe skin burns and eye damage.</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>Causes serious eye damage.</td>
</tr>
<tr>
<td>Respiratory or skin sensitisation</td>
<td>Not classified</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>Not classified</td>
</tr>
</tbody>
</table>
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STOT-single exposure : Not classified
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified
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) : 2921
UN-No. (IMDG) : 2921
UN-No. (IATA) : 2921
UN-No. (ADN) : 2921
UN-No. (RID) : 2921

14.2. UN proper shipping name
Proper Shipping Name (ADR) : CORROSIVE SOLID, FLAMMABLE, N.O.S.
Proper Shipping Name (IMDG) : CORROSIVE SOLID, FLAMMABLE, N.O.S.
Proper Shipping Name (IATA) : Corrosive solid, flammable, n.o.s.
Proper Shipping Name (ADN) : CORROSIVE SOLID, FLAMMABLE, N.O.S.
Proper Shipping Name (RID) : CORROSIVE SOLID, FLAMMABLE, N.O.S.
Transport document description (ADR) : UN 2921 CORROSIVE SOLID, FLAMMABLE, N.O.S. (1,2-BIS(CHLORODIMETHYLSILYL)ETHANE), 8 (4.1), II, (E)
Transport document description (IMDG) : UN 2921 CORROSIVE SOLID, FLAMMABLE, N.O.S. (1,2-BIS(CHLORODIMETHYLSILYL)ETHANE), 8 (4.1), II
Transport document description (IATA) : UN 2921 Corrosive solid, flammable, n.o.s. (1,2-BIS(CHLORODIMETHYLSILYL)ETHANE), 8 (4.1), II
Transport document description (ADN) : UN 2921 CORROSIVE SOLID, FLAMMABLE, N.O.S. (1,2-BIS(CHLORODIMETHYLSILYL)ETHANE), 8 (4.1), II
Transport document description (RID) : UN 2921 CORROSIVE SOLID, FLAMMABLE, N.O.S. (1,2-BIS(CHLORODIMETHYLSILYL)ETHANE), 8 (4.1), II
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14.3. Transport hazard class(es)

ADR
Transport hazard class(es) (ADR) : 8 (4.1)
Danger labels (ADR) : 8, 4.1

IMDG
Transport hazard class(es) (IMDG) : 8 (4.1)
Danger labels (IMDG) : 8, 4.1

IATA
Transport hazard class(es) (IATA) : 8 (4.1)
Hazard labels (IATA) : 8, 4.1

ADN
Transport hazard class(es) (ADN) : 8 (4.1)
Danger labels (ADN) : 8, 4.1

RID
Transport hazard class(es) (RID) : 8 (4.1)
Danger labels (RID) : 8, 4.1

14.4. Packing group

Packing group (ADR) : II
Packing group (IMDG) : II
Packing group (IATA) : II
Packing group (ADN) : II
Packing group (RID) : II

14.5. Environmental hazards

Dangerous for the environment : No
Marine pollutant : No
Other information : No supplementary information available
**1,2-BIS(Chlorodimethylsilyl)ethane**

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#### 14.6. Special precautions for user

- **Overland transport**
  - Classification code (ADR): CF2
  - Special provisions (ADR): 274
  - Limited quantities (ADR): 1kg
  - Excepted quantities (ADR): E2
  - Packing instructions (ADR): P002, IBC08
  - Mixed packing provisions (ADR): MP10
  - Portable tank and bulk container instructions (ADR): T3
  - Portable tank and bulk container special provisions (ADR): TP33
  - Tank code (ADR): SGAN, L4BN
  - Vehicle for tank carriage: AT
  - Transport category (ADR): 2
  - Special provisions for carriage - Packages (ADR): V11
  - Hazard identification number (Kemler No.): 84
  - Orange plates: 84 2921
  - Tunnel restriction code (ADR): E
  - EAC code: 2X

- **Transport by sea**
  - Special provisions (IMDG): 274
  - Limited quantities (IMDG): 1 kg
  - Excepted quantities (IMDG): E2
  - Packing instructions (IMDG): P002
  - IBC packing instructions (IMDG): IBC08
  - IBC special provisions (IMDG): B2, B4
  - Tank instructions (IMDG): T3
  - Tank special provisions (IMDG): TP33
  - EmS-No. (Fire): F-A
  - EmS-No. (Spillage): S-G
  - Stowage category (IMDG): B
  - Stowage and handling (IMDG): SW1, H2
  - Properties and observations (IMDG): Causes burns to skin, eyes and mucous membranes.

- **Air transport**
  - PCA Excepted quantities (IATA): E2
  - PCA Limited quantities (IATA): Y844
  - PCA limited quantity max net quantity (IATA): 5kg
  - PCA packing instructions (IATA): 859
  - PCA max net quantity (IATA): 15kg
  - CAO packing instructions (IATA): 863
  - CAO max net quantity (IATA): 50kg
  - ERG code (IATA): 8S

- **Inland waterway transport**
  - Classification code (ADN): CF2
  - Special provisions (ADN): 274
  - Limited quantities (ADN): 1 kg
  - Excepted quantities (ADN): E2
  - Equipment required (ADN): PP, EP
  - Number of blue cones/lights (ADN): 1
1,2-BIS(CHLORODIMETHYLSILYL)ETHANE
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**Rail transport**
- Classification code (RID): CF2
- Special provisions (RID): 274
- Limited quantities (RID): 1kg
- Excepted quantities (RID): E2
- Packing instructions (RID): P002, IBC08
- Special packing provisions (RID): B4
- Mixed packing provisions (RID): MP10
- Portable tank and bulk container instructions (RID): T3
- Portable tank and bulk container special provisions (RID): TP33
- Tank codes for RID tanks (RID): SGAN, L4BN
- Transport category (RID): 2
- Special provisions for carriage – Packages (RID): W11
- Coils express (express parcels) (RID): CE10
- Hazard identification number (RID): 84

**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
- 1,2-BIS(CHLORODIMETHYLSILYL)ETHANE is not on the REACH Candidate List
- 1,2-BIS(CHLORODIMETHYLSILYL)ETHANE 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**
- Class for fire hazard: Class II-1
- Store unit: 5 liter
- Classification remarks: R10 <H228;H314>: Emergency management guidelines for the storage of flammable liquids must be followed
- 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:
1,2-BIS(CHLORODIMETHYLSILYL)ETHANE
Safety Data Sheet

Other information
Prepared by safety and environmental affairs.

Full text of H- and EUH-statements:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye Dam. 1</td>
<td>Serious eye damage/eye irritation, Category 1</td>
</tr>
<tr>
<td>Flam. Sol. 2</td>
<td>Flammable solids, Category 2</td>
</tr>
<tr>
<td>Skin Corr. 1B</td>
<td>Skin corrosion/irritation, Category 1B</td>
</tr>
<tr>
<td>H228</td>
<td>Flammable solid.</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>
<tr>
<td>EUH014</td>
<td>Reacts violently with water.</td>
</tr>
</tbody>
</table>

SDS EU (REACH Annex II) - Custom

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