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

1.1. Product identifier

<table>
<thead>
<tr>
<th>Product form</th>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Substance name</td>
<td>GERMANIUM TETRACHLORIDE 99.999%</td>
</tr>
<tr>
<td>Product code</td>
<td>GEG5601</td>
</tr>
<tr>
<td>Formula</td>
<td>Cl4Ge</td>
</tr>
<tr>
<td>Synonyms</td>
<td>TETRACHLOROGERMANIUM</td>
</tr>
<tr>
<td>Chemical family</td>
<td>GERMANIUM CHLORIDE</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

Classification according to Regulation (EC) No. 1272/2008 [CLP]

- Skin corrosion/irritation, Category 1A
- Serious eye damage/eye irritation, Category 1
- Specific target organ toxicity — Single exposure, Category 3
- Respiratory tract irritation
- Full text of H statements: see section 16
- Specific concentration limits: (1 \( \leq C < 100 \))
- STOT SE 3, H335

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
- GHS07
GERMANIUM TETRACHLORIDE 99.999%
Safety Data Sheet

Signal word (CLP) : Danger
Hazard statements (CLP) :
H314 - Causes severe skin burns and eye damage.
H335 - May cause respiratory irritation.
Precautionary statements (CLP) :
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P260 - Do not breathe vapours.
P264 - Wash hands thoroughly after handling.
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P271 - Use only outdoors or in a well-ventilated area.
P310 - Immediately call a POISON CENTER or doctor/physician

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 : GERMANIUM TETRACHLORIDE 99.999%
CAS-No. : 10038-98-9
EC-No. : 233-116-7

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germanium tetrachloride</td>
<td>(CAS-No.) 10038-98-9 (EC-No.) 233-116-7</td>
<td>99 - 100</td>
<td>Skin Corr. 1A, H314 Eye Dam. 1, H318 STOT SE 3, H335</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. Get medical advice/attention if you feel unwell.

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 respiratory irritation. May be harmful if inhaled.
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
Note to physician: Chlorogermanes react with water to form hydrochloric acid, consequently treatment for acid burns may be considered.

SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media : None.
Unsafe extinguishing media : Water.

5.2. Special hazards arising from the substance or mixture
Fire hazard :
Irritating fumes and acid vapors may develop when material is exposed to elevated temperatures or open flame.
5.3. Advice for firefighters

Firefighting instructions: Note, since germanium tetrachloride is not flammable, precautions refer to mixtures with flammable materials.

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 vapour and mist.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures: Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment: Equip cleanup crew with proper protection.

Emergency procedures: Stop release.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

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 all eye and skin contact and do not breathe vapour and mist. Provide good ventilation in process area to prevent formation of vapour. Avoid contact with water.

Hygiene measures: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Keep container tightly closed.


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

<table>
<thead>
<tr>
<th></th>
<th>GERMANIUM TETRACHLORIDE 99.999% (10038-98-9)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Latvia</td>
</tr>
<tr>
<td></td>
<td>OEL TWA (mg/m³)</td>
</tr>
<tr>
<td></td>
<td>1 mg/m³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Germanium tetrachloride (10038-98-9)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Bulgaria</td>
</tr>
<tr>
<td></td>
<td>OEL TWA (mg/m³)</td>
</tr>
<tr>
<td></td>
<td>1 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Lithuania</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8.2. Exposure controls

Appropriate engineering controls:
Handle in an enclosing hood with exhaust 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:
GERMANIUM TETRACHLORIDE 99.999%
Safety Data Sheet

Wear suitable protective clothing

Respiratory protection:
Where exposure through inhalation may occur from use, respiratory protection equipment is recommended

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>Liquid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Clear liquid</td>
</tr>
<tr>
<td>Molecular mass</td>
<td>214.4 g/mol</td>
</tr>
<tr>
<td>Colour</td>
<td>No data available</td>
</tr>
<tr>
<td>Odour</td>
<td>Acid. Similar to hydrogen chloride.</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>Refractive index</td>
<td>1.4644</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>No data available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>-49 - -52 °C</td>
</tr>
<tr>
<td>Boiling point</td>
<td>83.1 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not flammable</td>
</tr>
<tr>
<td>Critical temperature</td>
<td>548 K</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>No data available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>25 mm Hg @ 0°C; 67 mm Hg @ 20°C</td>
</tr>
<tr>
<td>Critical pressure</td>
<td>36.6 atm</td>
</tr>
<tr>
<td>Relative vapour density at 20 °C</td>
<td>&gt; 1</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.879</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.

10.3. Possibility of hazardous reactions
Reacts with water and moisture in air, liberating hydrogen chloride. Reacts violently with bases.

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

10.5. Incompatible materials

10.6. Hazardous decomposition products
Acid vapors.

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute toxicity : Not classified
GERMANIUM TETRACHLORIDE 99.999%
Safety Data Sheet

Germanium tetrachloride (10038-98-9)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 intravenous mouse</td>
<td>56 mg/kg</td>
</tr>
<tr>
<td>LC50 inhalation mouse (2 h)</td>
<td>44000</td>
</tr>
<tr>
<td>LC50 inhalation mouse</td>
<td>3535 ppm/4h</td>
</tr>
</tbody>
</table>

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: May cause respiratory irritation.
STOT-repeated exposure: Not classified
Aspiration hazard: Not classified

Potential adverse human health effects and symptoms:
Inhalation of large amounts is expected to cause necrosis of tracheal epithelium, bronchitis and interstitial pneumonia. Persistent changes in the respiratory system have been reported from 4mg/m3. Lasting changes in the respiratory system function have been reported in animals. Other: GENETOX PROGRAM 1986, POSITIVE: B Subtilis rec assay; RTECS# LY5225000.

Symptoms/effects after inhalation: May cause respiratory irritation. May be harmful if inhaled.
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
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. (ADR) : 3390
UN-No. (IMDG) : 3390
UN-No. (IATA) : 3390
UN-No. (ADN) : 3390
UN-No. (RID) : 3390

Print date: 10/04/2019
 SDS ID: GEG5601
GERMANIUM TETRACHLORIDE 99.999%
Safety Data Sheet

14.2. UN proper shipping name

| Proper Shipping Name (ADR) | : TOXIC BY INHALATION LIQUID, CORROSIVE, N.O.S. |
| Proper Shipping Name (IMDG) | : TOXIC BY INHALATION LIQUID, CORROSIVE, N.O.S. |
| Proper Shipping Name (IATA) | : Toxic by inhalation liquid, corrosive, n.o.s. |
| Proper Shipping Name (ADN) | : TOXIC BY INHALATION LIQUID, CORROSIVE, N.O.S. |
| Proper Shipping Name (RID) | : TOXIC BY INHALATION LIQUID, CORROSIVE, N.O.S. |

| Transport document description (ADR) | : UN 3390 TOXIC BY INHALATION LIQUID, CORROSIVE, N.O.S. (GERMANIUM TETRACHLORIDE), 6.1 (8), I, (C/D) |
| Transport document description (IMDG) | : UN 3390 TOXIC BY INHALATION LIQUID, CORROSIVE, N.O.S. (GERMANIUM TETRACHLORIDE), 6.1 (8), I |
| Transport document description (IATA) | : UN 3390 Toxic by inhalation liquid, corrosive, n.o.s. (GERMANIUM TETRACHLORIDE), 6.1 |
| Transport document description (ADN) | : UN 3390 TOXIC BY INHALATION LIQUID, CORROSIVE, N.O.S. (GERMANIUM TETRACHLORIDE), 6.1 (8), I |
| Transport document description (RID) | : UN 3390 TOXIC BY INHALATION LIQUID, CORROSIVE, N.O.S. (GERMANIUM TETRACHLORIDE), 6.1 (8), I |

14.3. Transport hazard class(es)

| ADR | Transport hazard class(es) (ADR) | : 6.1 (8) |
| Danger labels (ADR) | : 6.1, 8 |

| IMDG | Transport hazard class(es) (IMDG) | : 6.1 (8) |
| Danger labels (IMDG) | : 6.1, 8 |

| IATA | Transport hazard class(es) (IATA) | : 6.1 (8) |
| ADN | Transport hazard class(es) (ADN) | : 6.1 (8) |
| Danger labels (ADN) | : 6.1, 8 |

| RID | Transport hazard class(es) (RID) | : 6.1 (8) |
| Danger labels (RID) | : 6.1, 8 |

14.4. Packing group

| Packing group (ADR) | : I |
GERMANIUM TETRACHLORIDE 99.999%
Safety Data Sheet

Packing group (IMDG) : I
Packing group (IATA) : Not applicable
Packing group (ADN) : I
Packing group (RID) : I

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) : TC1
  Special provisions (ADR) : 274
  Limited quantities (ADR) : 0
  Excepted quantities (ADR) : E0
  Packing instructions (ADR) : P602
  Special packing provisions (ADR) : PP86
  Mixed packing provisions (ADR) : MP8, MP17
  Portable tank and bulk container instructions (ADR) : T20
  Portable tank and bulk container special provisions (ADR) : TP2
  Tank code (ADR) : L10CH
  Tank special provisions (ADR) : TU14, TU15, TE19, TE21
  Vehicle for tank carriage : AT
  Transport category (ADR) : 1
  Special provisions for carriage - Loading, unloading and handling (ADR) : CV1, CV13, CV28
  Special provisions for carriage - Operation (ADR) : S9, S14
  Hazard identification number (Keimer No.) : 668
  Orange plates : 668, 3390
  Tunnel restriction code (ADR) : C/D
  EAC code : 2XE
  APP code : B

- Transport by sea
  Special provisions (IMDG) : 274
  Limited quantities (IMDG) : 0
  Excepted quantities (IMDG) : E0
  Packing instructions (IMDG) : P602
  Tank instructions (IMDG) : T20
  Tank special provisions (IMDG) : TP2, TP13
  EmS-No. (Fire) : F-A
  EmS-No. (Spillage) : S-B
  Stowage category (IMDG) : D
  Stowage and handling (IMDG) : SW2
  Properties and observations (IMDG) : A variety of toxic liquids which present a highly toxic inhalation hazard as well as being corrosive. Highly toxic if swallowed, by skin contact or by inhalation.

- Air transport
  PCA Limited quantities (IATA) : Forbidden
  PCA limited quantity max net quantity (IATA) : Forbidden
  PCA packing instructions (IATA) : Forbidden
  PCA max net quantity (IATA) : Forbidden
  CAO packing instructions (IATA) : Forbidden
CAO max net quantity (IATA) : Forbidden
ERG code (IATA) : 6C

- Inland waterway transport
  Classification code (ADN) : TC1
  Special provisions (ADN) : 274, 802
  Limited quantities (ADN) : 0
  Excepted quantities (ADN) : E0
  Equipment required (ADN) : PP, EP, TOX, A
  Ventilation (ADN) : VE02
  Number of blue cones/lights (ADN) : 2

- Rail transport
  Classification code (RID) : TC1
  Special provisions (RID) : 274
  Limited quantities (RID) : 0
  Excepted quantities (RID) : E0
  Packing instructions (RID) : P602
  Portable tank and bulk container instructions (RID) : T20
  Portable tank and bulk container special provisions (RID) : TP2
  Tank codes for RID tanks (RID) : L10CH
  Special provisions for RID tanks (RID) : TU14, TU15, TU38, TE21, TE22
  Transport category (RID) : 1
  Special provisions for carriage - Loading, unloading and handling (RID) : CW13, CW28, CW31
  Hazard identification number (RID) : 668

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
GERMANIUM TETRACHLORIDE 99.999% is not on the REACH Candidate List
GERMANIUM TETRACHLORIDE 99.999% is not on the REACH Annex XIV List
GERMANIUM TETRACHLORIDE 99.999% is not subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

15.1.2. National regulations

Germany
Reference to AwSV : Water hazard class (WGK) 1, Slightly hazardous to water

Netherlands
SZW-lijst van kankerverwekkende stoffen : The substance is not listed
SZW-lijst 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
GERMANIUM TETRACHLORIDE 99.999%
Safety Data Sheet

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:

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ND</td>
<td>Not Determined, No Data</td>
</tr>
<tr>
<td>NA</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>LD</td>
<td>Lethal Dose</td>
</tr>
<tr>
<td>LC</td>
<td>Lethal Concentration</td>
</tr>
<tr>
<td>ATE</td>
<td>Acute Toxicity Estimales</td>
</tr>
<tr>
<td>TWA</td>
<td>Time weighted average</td>
</tr>
<tr>
<td>TLV</td>
<td>Threshold limit value</td>
</tr>
<tr>
<td>NIOSH</td>
<td>National Institute for Occupational Safety and Health</td>
</tr>
<tr>
<td>IARC</td>
<td>International Agency for Research on Cancer</td>
</tr>
<tr>
<td>NTP</td>
<td>National Toxicology Program</td>
</tr>
<tr>
<td>HMIS</td>
<td>Hazardous Material Information System</td>
</tr>
<tr>
<td>CAS No.</td>
<td>Chemical Abstract Service Registration Number</td>
</tr>
<tr>
<td>EC No.</td>
<td>European Commission Registration Number</td>
</tr>
<tr>
<td>EC Index No.</td>
<td>European Commission Index Number</td>
</tr>
<tr>
<td>OECD</td>
<td>The Organisation for Economic Co-operation and Development</td>
</tr>
<tr>
<td>GHS</td>
<td>The Globally Harmonized System of Classification and Labelling</td>
</tr>
<tr>
<td>APF</td>
<td>Assigned Protection Factor</td>
</tr>
</tbody>
</table>

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>Skin Corr. 1A</td>
<td>Skin corrosion/irritation, Category 1A</td>
</tr>
<tr>
<td>STOT SE 3</td>
<td>Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation</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>H335</td>
<td>May cause respiratory irritation.</td>
</tr>
</tbody>
</table>

SDS EU (REACH Annex II) - Custom

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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