# SECTION 1: Identification

## 1.1. Identification

<table>
<thead>
<tr>
<th>Field</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product name</td>
<td>TRIS(TRIFLUOROMETHYL)IODOGERMANE</td>
</tr>
<tr>
<td>Product code</td>
<td>GET8717</td>
</tr>
<tr>
<td>Product form</td>
<td>Substance</td>
</tr>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Formula</td>
<td>C3F9GeI</td>
</tr>
<tr>
<td>Synonyms</td>
<td>TRIS(TRIFLUOROMETHYL)GERMANIUM IODIDE</td>
</tr>
<tr>
<td>Chemical family</td>
<td>ORGANOGERMANIUM</td>
</tr>
</tbody>
</table>

## 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 - 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**

- Skin corrosion/irritation Category 1B: H314 - Causes severe skin burns and eye damage
- Serious eye damage/eye irritation Category 1: H318 - Causes serious eye damage

Full text of H statements: see section 16

## 2.2. GHS Label elements, including precautionary statements

### GHS US labeling

- **Signal word (GHS US)**: Danger
- **Hazard pictograms (GHS US)**: ![Hazard Pictogram]

### Hazard statements (GHS US)

- H314 - Causes severe skin burns and eye damage
- H318 - Causes serious eye damage

### Precautionary statements (GHS US)

- P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- P264 - Wash hands thoroughly after handling.
- P301+P330+P331 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- P305+P361+P353 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- P304+P340 - If inhaled: Move person to fresh air and keep comfortable for breathing
- P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- P310 - Immediately call a doctor
- P321 - Specific treatment (see first aid instructions on this label)
- P363 - Wash contaminated clothing before reuse.
- P405 - Store locked up.
- 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

<table>
<thead>
<tr>
<th>Substance type</th>
<th>Multi-constituent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>TRIS(TRIFLUOROMETHYL)IODOGERMANE</td>
</tr>
<tr>
<td>CAS-No.</td>
<td>66348-18-3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tris(trifluoromethyl)iodogermane</td>
<td>(CAS-No.) 66348-18-3</td>
<td>95 - 100</td>
<td>Skin Corr. 1B, H314</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Eye Dam. 1, H318</td>
</tr>
<tr>
<td>Other Organogermanes</td>
<td></td>
<td>0 - 5</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

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

4.1.1. 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.

4.1.2. 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.

4.1.3. First-aid measures after skin contact: Wash with plenty of soap and water. Get immediate medical advice/attention.

4.1.4. 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.

4.1.5. 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: 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. Immediate medical attention and special treatment, if necessary

No additional information available

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Unsuitable extinguishing media: Water.

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

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

For containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
**TRIS(TRIFLUOROMETHYL)IODOGERMANE**

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<table>
<thead>
<tr>
<th>Methods for cleaning up</th>
<th>Clean up any spills as soon as possible, using an absorbent material to collect it. Sweep or shovel spills into appropriate container for disposal.</th>
</tr>
</thead>
</table>

### 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

<table>
<thead>
<tr>
<th>Precautions for safe handling</th>
<th>Avoid all eye and skin contact and do not breathe vapor and mist. Provide good ventilation in process area to prevent accumulation of vapors.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hygiene measures</td>
<td>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.</td>
</tr>
</tbody>
</table>

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

| Storage conditions           | Keep container tightly closed. Store locked up. Store in sealed containers in the dark. |
| Incompatible materials       | Water. |
| 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

<table>
<thead>
<tr>
<th>Appropriate engineering controls</th>
<th>Provide local exhaust or general room ventilation.</th>
</tr>
</thead>
</table>

#### 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 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

<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>Liquid.</td>
</tr>
<tr>
<td>Molecular mass</td>
<td>406.51 g/mol</td>
</tr>
<tr>
<td>Color</td>
<td>Straw to purple.</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>Refractive index</td>
<td>1.358</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>&gt; 1</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>-40 °C</td>
</tr>
<tr>
<td>Boiling point</td>
<td>72 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt; 110 °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>No data available</td>
</tr>
</tbody>
</table>
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Vapor pressure : No data available
Relative vapor density at 20 °C : > 1
Relative density : 2.07
Solubility : Insoluble in water. Reacts with 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
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
Slowly reacts with water to form hydrogen iodide. UV radiation degrades product.

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

10.5. Incompatible materials
Water.

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 sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
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 : 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
No additional information available

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**

<table>
<thead>
<tr>
<th>Other adverse effects</th>
<th>Effect on the ozone layer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This substance may be hazardous to the environment.</td>
</tr>
<tr>
<td></td>
<td>No additional information available</td>
</tr>
</tbody>
</table>

**SECTION 13: Disposal considerations**

13.1. **Disposal methods**

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

**SECTION 14: Transport information**

14.1. **UN number**

<table>
<thead>
<tr>
<th>UN-No.(DOT)</th>
<th>DOT NA no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1760</td>
<td>UN1760</td>
</tr>
</tbody>
</table>

14.2. **UN proper shipping name**

<table>
<thead>
<tr>
<th>Transport document description</th>
<th>UN1760 Corrosive liquids, n.o.s. (TRIS(TRIFLUOROMETHYL)IODOGERMANE), 8, II</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper Shipping Name (DOT)</td>
<td>Corrosive liquids, n.o.s. (TRIS(TRIFLUOROMETHYL)IODOGERMANE)</td>
</tr>
<tr>
<td>Class (DOT)</td>
<td>8 - Class 8 - Corrosive material 49 CFR 173.136</td>
</tr>
<tr>
<td>Packing group (DOT)</td>
<td>II - Medium Danger</td>
</tr>
<tr>
<td>Hazard labels (DOT)</td>
<td>8 - Corrosive</td>
</tr>
</tbody>
</table>

| DOT Packaging Non Bulk (49 CFR 173.xxx) | 202 |
| DOT Packaging Bulk (49 CFR 173.xxx)    | 242 |
| DOT Packaging Exceptions (49 CFR 173.xxx) | 154 |
| DOT Symbols                          | G - Identifies PSN requiring a technical name |

14.3. **Additional information**

| Emergency Response Guide (ERG) Number | 154 |
| Other information                     | No supplementary information available. |

**Transport by sea**

| DOT Vessel Stowage Location | B - (i) The material may be stowed “on deck” or “under deck” on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) “On deck only” on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded. |
| DOT Vessel Stowage Other       | 40 - Stow “clear of living quarters” |

**Air transport**

| DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) | 1 L |
| DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)   | 30 L |
TRIS(TRIFLUOROMETHYL)IODOGERMANE
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SECTION 15: Regulatory information

15.1. US Federal regulations

TRIS(TRIFLUOROMETHYL)IODOGERMANE (66348-18-3)

TSCA Exemption/Exclusion

CAUTION: This material is supplied for research and development purposes subject to the R&D exemption under TSCA, 40 CFR 720.36, and must meet the requirements of the exemption, including supervision by a "technically qualified individual" as defined by 40 CFR 720.3(ee). The use of this material for "commercial purposes" as defined by 40 CFR 720.3(r) is not permitted in the United States.

Tris(trifluoromethyl)iodogermane (66348-18-3)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA
No additional information available

EU-Regulations
No additional information available

National regulations
No additional information available

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:

H314: Causes severe skin burns and eye damage
H318: Causes serious eye damage

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: 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given.

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: 1 Slight Hazard - Materials that are normally stable but can become unstable (self-react) at high temperatures and pressures. Materials may react non-violently with water or undergo hazardous polymerization in the absence of inhibitors.

Prepared by safety and environmental affairs.

Date of issue: 08/15/2016 Version: 1.0

SDS US (GHS HazCom 2012) - Custom

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

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Print date: 04/10/2019 EN (English US) SDS ID: GET8717 6/7