

**3-CHLOROISOBUTYLDIMETHYLCHLOROSILANE**

## Safety Data Sheet SIC2277.0

Date of issue: 03/01/2016

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Version: 1.1

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

|                 |                                                     |
|-----------------|-----------------------------------------------------|
| Product name    | : 3-CHLOROISOBUTYLDIMETHYLCHLOROSILANE              |
| Product code    | : SIC2277.0                                         |
| Product form    | : Substance                                         |
| Physical state  | : Liquid                                            |
| Formula         | : C <sub>6</sub> H <sub>14</sub> Cl <sub>2</sub> Si |
| Synonyms        | : (3-CHLORO-2-METHYLIPROPYL)DIMETHYLCHLOROSILANE    |
| Chemical family | : ORGANOCHLOROSILANE                                |

**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**

|                                              |                                              |
|----------------------------------------------|----------------------------------------------|
| Flammable liquids Category 3                 | H226 Flammable liquid and vapor              |
| 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**

Hazard pictograms (GHS US)



Signal word (GHS US)

: Danger

Hazard statements (GHS US)

: H226 - Flammable liquid and vapor  
 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.  
 P260 - Do not breathe vapors.  
 P264 - Wash hands thoroughly after handling.  
 P210 - Keep away from heat, open flames, sparks. - No smoking.  
 P233 - Keep container tightly closed.  
 P240 - Ground/Bond container and receiving equipment  
 P241 - Use explosion-proof electrical equipment  
 P242 - Use only non-sparking tools.  
 P243 - Take precautionary measures against static discharge.  
 P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting  
 P303+P361+P353 - If on skin (or hair): take off immediately all contaminated clothing. rinse skin with water/shower  
 P304+P340 - If inhaled: Remove 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  
 P370+P378 - In case of fire: Use water spray, foam, carbon dioxide, dry chemical to extinguish.  
 P363 - Wash contaminated clothing before reuse.  
 P403+P235 - Keep in a cool place  
 P405 - Store locked up.  
 P501 - Dispose of contents/container to licensed waste disposal facility.

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P321 - Specific treatment (see first aid instructions on this label)

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

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.

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

Not applicable

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Substance type : Multi-constituent  
Name : 3-CHLOROISOBUTYLDIMETHYLCHLOROSILANE  
CAS-No. : 18145-83-0

| Name                                 | Product identifier   | %        | GHS-US classification                                         |
|--------------------------------------|----------------------|----------|---------------------------------------------------------------|
| 3-Chloroisobutyldimethylchlorosilane | (CAS-No.) 18145-83-0 | 95 - 100 | Flam. Liq. 3, H226<br>Skin Corr. 1B, H314<br>Eye Dam. 1, H318 |
| Other Organosilanes                  |                      | 0 - 5    | Not classified                                                |

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 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 (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

Suitable extinguishing media : Water spray. Foam. Carbon dioxide. Dry chemical.

Unsuitable extinguishing media : Water.

### 5.2. Specific hazards arising from the chemical

Fire hazard : Flammable liquid and vapor. Irritating fumes of hydrochloric acid and organic acid vapors may develop when material is exposed to water 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

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.

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### 6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection. Do not attempt to take action without suitable protective equipment. 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.

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. 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/sparks/open flames/hot surfaces. - No smoking.

Precautions for safe handling : Avoid all eye and skin contact and do not breathe vapor and mist. Ground/bond container and receiving equipment. Provide good ventilation in process area to prevent accumulation of vapors. Take precautionary measures against static discharge. 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 : Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof electrical equipment.

Storage conditions : Keep container tightly closed. Keep in a cool place. Store locked up.

Incompatible materials : Acids. Amines. 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 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 : Liquid

Appearance : Clear liquid.

Molecular mass : 185.17 g/mol

Color : Straw.

Odor : Acrid.

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|                                             |                              |
|---------------------------------------------|------------------------------|
| Odor threshold                              | : No data available          |
| Refractive index                            | : 1.4522                     |
| pH                                          | : No data available          |
| Relative evaporation rate (butyl acetate=1) | : No data available          |
| Melting point                               | : No data available          |
| Freezing point                              | : < 0 °C                     |
| Boiling point                               | : 89 °C @ 25 mm Hg           |
| Flash point                                 | : 60 °C                      |
| Auto-ignition temperature                   | : No data available          |
| Decomposition temperature                   | : No data available          |
| Flammability (solid, gas)                   | : Flammable liquid and vapor |
| Vapor pressure                              | : < 5 mm Hg @ 25°C           |
| Relative vapor density at 20 °C             | : > 1                        |
| Relative density                            | : 1.03                       |
| Solubility                                  | : 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 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

Acids. Amines. Oxidizing agent.

### 10.6. Hazardous decomposition products

Hydrogen chloride. Organic acid vapors.

## 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.                    |

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|                                    |                                |
|------------------------------------|--------------------------------|
| 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

|                           |                                                       |
|---------------------------|-------------------------------------------------------|
| 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) | : 2986 |
| DOT NA no.  | UN2986 |

#### 14.2. UN proper shipping name

|                                |                                                                                                        |
|--------------------------------|--------------------------------------------------------------------------------------------------------|
| Transport document description | : UN2986 Chlorosilanes, corrosive, flammable, n.o.s. (3-CHLOROISOBUTYLDIMETHYLCHLOROSILANE), 8 (3), II |
| Proper Shipping Name (DOT)     | : Chlorosilanes, corrosive, flammable, n.o.s.<br>(3-CHLOROISOBUTYLDIMETHYLCHLOROSILANE)                |
| Class (DOT)                    | : 8 - Class 8 - Corrosive material 49 CFR 173.136                                                      |
| Packing group (DOT)            | : II - Medium Danger                                                                                   |
| Hazard labels (DOT)            | : 8 - Corrosive<br>3 - Flammable liquid                                                                |



|                                           |        |
|-------------------------------------------|--------|
| DOT Packaging Non Bulk (49 CFR 173.xxx)   | : 206  |
| DOT Packaging Bulk (49 CFR 173.xxx)       | : 243  |
| DOT Packaging Exceptions (49 CFR 173.xxx) | : None |

#### 14.3. Additional information

|                                       |                                           |
|---------------------------------------|-------------------------------------------|
| Emergency Response Guide (ERG) Number | : 155                                     |
| Other information                     | : No supplementary information available. |

#### Transport by sea

|                             |                                                                                               |
|-----------------------------|-----------------------------------------------------------------------------------------------|
| DOT Vessel Stowage Location | : C - The material must be stowed "on deck only" on a cargo vessel and on a passenger vessel. |
| DOT Vessel Stowage Other    | : 40 - Stow "clear of living quarters"                                                        |

#### Air transport

|                                                                     |             |
|---------------------------------------------------------------------|-------------|
| DOT Quantity Limitations Passenger aircraft/rail<br>(49 CFR 173.27) | : Forbidden |
|---------------------------------------------------------------------|-------------|

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DOT Quantity Limitations Cargo aircraft only (49 : 30 L  
CFR 175.75)

### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

##### 3-Chloroisobutyldimethylchlorosilane (18145-83-0)

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

##### 3-Chloroisobutyldimethylchlorosilane (18145-83-0)

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

#### National regulations

##### 3-Chloroisobutyldimethylchlorosilane (18145-83-0)

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

#### 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::

|      |                                         |
|------|-----------------------------------------|
| H226 | Flammable liquid and vapor              |
| 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 | : 2 Moderate Hazard - Materials which must be moderately heated or exposed to high ambient temperatures before ignition will occur. Includes liquids having a flash point at or above 100 F but below 200 F. (Classes II & IIIA)               |
| 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.

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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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