

**BIS(METHYLDIMETHOXYSILYL)METHANE**

Safety Data Sheet SIB1635.0

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Version: 2.0

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

Product name : BIS(METHYLDIMETHOXYSILYL)METHANE  
 Product code : SIB1635.0  
 Product form : Substance  
 Physical state : Liquid  
 Formula : C<sub>7</sub>H<sub>20</sub>O<sub>4</sub>Si<sub>2</sub>  
 Synonyms : 2,2,4,4-TETRAMETHOXY-1,3-DISILAPENTANE  
 Chemical family : ORGANOMETHOXYSILANE

**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 4 H227 Combustible liquid  
 Acute toxicity (oral) Category 3 H301 Toxic if swallowed  
 Serious eye damage/eye irritation Category 2A H319 Causes serious eye irritation  
 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) :

H227 - Combustible liquid  
 H301 - Toxic if swallowed  
 H319 - Causes serious eye irritation

Precautionary statements (GHS US) :

P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
 P210 - Keep away from heat, open flames, sparks. - No smoking.  
 P264 - Wash hands thoroughly after handling.  
 P270 - Do not eat, drink or smoke when using this product.  
 P330 - Rinse mouth.  
 P301+P310 - If swallowed: Immediately call a doctor  
 P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
 P337+P313 - If eye irritation persists: Get medical advice/attention.  
 P370+P378 - In case of fire: Use water spray or fog, foam, carbon dioxide, dry chemical to extinguish.  
 P403+P235 - Keep in a cool place  
 P405 - Store locked up.  
 P501 - Dispose of contents/container to licensed waste disposal facility.

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

Other hazards not contributing to the classification

: Additional methanol may be formed by reaction with moisture and water. The US OSHA PEL (TWA) for methanol is 200 ppm.

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

Not applicable

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### SECTION 3: Composition/Information on ingredients

#### 3.1. Substances

Substance type : Mono-constituent  
Name : BIS(METHYLDIMETHOXYSYLYL)METHANE  
CAS-No. : 18297-79-5

Name	Product identifier	%	GHS-US classification
Bis(methyldimethoxysilyl)methane	(CAS-No.) 18297-79-5	95 - 100	Flam. Liq. 4, H227 Acute Tox. 3 (Oral), H301 Eye Irrit. 2A, H319

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 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 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 (acute and delayed)

Symptoms/effects after inhalation : May cause irritation to the respiratory tract.

Symptoms/effects after skin contact : May cause skin irritation.

Symptoms/effects after eye contact : Causes serious eye irritation.

Symptoms/effects after ingestion : Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

Chronic symptoms : On contact with water this compound liberates methanol which is known to have a chronic effect on the central nervous system. Methanol may effect the central nervous system resulting in persistent or recurring headaches or impaired vision.

#### 4.3. Immediate medical attention and special treatment, if necessary

NOTE TO PHYSICIAN: This product reacts with water in the acid contents of the stomach to form methanol. The combination of visual disturbances, metabolic acidosis and formic acid in urine is evidence of methanol poisoning. The therapeutic intravenous administration of ethanol (10 mls/hour) allows methanol to be preferentially oxidized and reduces production of methanol metabolites. Acidosis must be treated with intravenous administration of sodium bicarbonate and methanol elimination may be increased by hemodialysis, as indicated. Treatment should be based on blood methanol levels and acid-base balance.

### SECTION 5: Fire-fighting measures

#### 5.1. Suitable (and unsuitable) extinguishing media

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

#### 5.2. Specific hazards arising from the chemical

Fire hazard : Combustible liquid. 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 : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire.

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 : Remove ignition sources. Use special care to avoid static electric charges.

##### 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.

#### 6.2. Environmental precautions

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

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### 6.3. Methods and material for containment and cleaning up

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

Precautions for safe handling : Avoid all eye and skin contact and do not breathe vapor and mist. Provide good ventilation in process area to prevent accumulation of vapors. Containers must be properly grounded before beginning transfer. Use only non-sparking tools. Material should be handled in a laboratory hood whenever possible.

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

Technical measures : Ground/bond container and receiving equipment.

Storage conditions : Keep container tightly closed.

Incompatible materials : 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 : Handle in an enclosing hood with exhaust 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. 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 organic vapor (black 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	: 224.4 g/mol
Color	: No data available
Odor	: Characteristic.
Odor threshold	: No data available
Refractive index	: 1.4121
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: < 1
Melting point	: < 0 °C
Freezing point	: No data available
Boiling point	: 184 °C
Flash point	: > 65 °C

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Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Combustible liquid
Vapor pressure	: No data available
Relative vapor density at 20 °C	: > 1
Relative density	: 0.968
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

Material decomposes slowly in contact with moist air or with water liberating methanol.

### 10.4. Conditions to avoid

Heat. Sparks. Open flame.

### 10.5. Incompatible materials

Oxidizing agent.

### 10.6. Hazardous decomposition products

Methanol. Organic acid vapors. Silicon dioxide.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

#### BIS(METHYLDIMETHOXYSILYL)METHANE (18297-79-5)

LD50 oral rat	12300 µl/kg
ATE US (oral)	105.263 mg/kg body weight

#### Bis(methyldimethoxysilyl)methane (18297-79-5)

ATE US (oral)	100 mg/kg body weight
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Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Causes serious eye irritation.
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 : May cause skin irritation.

Symptoms/effects after eye contact : Causes serious eye irritation.

Symptoms/effects after ingestion : Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

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Chronic symptoms	: On contact with water this compound liberates methanol which is known to have a chronic effect on the central nervous system. Methanol may effect the central nervous system resulting in persistent or recurring headaches or impaired vision.
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

Effect on the ozone layer : No additional information available

### SECTION 13: Disposal considerations

#### 13.1. Disposal methods

Product/Packaging disposal recommendations : Incinerate. 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) : 2810  
DOT NA no. : UN2810

#### 14.2. UN proper shipping name

Transport document description : UN2810 Toxic, liquids, organic, n.o.s. (BIS(METHYLDIMETHOXSILYL)METHANE), 6.1, III  
Proper Shipping Name (DOT) : Toxic, liquids, organic, n.o.s.  
(BIS(METHYLDIMETHOXSILYL)METHANE)  
Class (DOT) : 6.1 - Class 6.1 - Poisonous materials 49 CFR 173.132  
Packing group (DOT) : III - Minor Danger  
Hazard labels (DOT) : 6.1 - Poison



DOT Packaging Non Bulk (49 CFR 173.xxx) : 203  
DOT Packaging Bulk (49 CFR 173.xxx) : 241  
DOT Packaging Exceptions (49 CFR 173.xxx) : 153  
DOT Symbols : G - Identifies PSN requiring a technical name

#### 14.3. Additional information

Emergency Response Guide (ERG) Number : 153  
Other information : (Air transport of self-venting containers is prohibited).

#### Transport by sea

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" 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 (49 CFR 173.27) : 60 L  
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 220 L

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### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

##### BIS(METHYLDIMETHOXSILYL)METHANE (18297-79-5)

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.

##### Bis(methyldimethoxysilyl)methane (18297-79-5)

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::

H227	Combustible liquid
H301	Toxic if swallowed
H319	Causes serious eye irritation

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	: 4 Severe Hazard - Life-threatening, major or permanent damage may result from single or repeated overexposures
Flammability	: 3 Serious Hazard - Materials capable of ignition under almost all normal temperature conditions. Includes flammable liquids with flash points below 73 F and boiling points above 100 F. as well as liquids with flash points between 73 F and 100 F. (Classes IB & IC)
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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