

### SECTION 1: Identification

#### 1.1. Identification

Product form : Substance  
 Substance name : Bis(ethoxy)dimethylsilane  
 CAS-No. : 78-62-6  
 Product code : 6183-1-X0  
 Formula : C6H16O2Si  
 Other means of identification : MFCD00009068

#### 1.2. Recommended use and restrictions on use

Use of the substance/mixture : Laboratory chemicals  
 Manufacture of substances  
 Scientific research and development

#### 1.3. Supplier

SynQuest Laboratories, Inc.  
 P.O. Box 309  
 Alachua, FL 32615 - United States of America  
 T (386) 462-0788 - F (386) 462-7097  
[info@synquestlabs.com](mailto:info@synquestlabs.com) - [www.synquestlabs.com](http://www.synquestlabs.com)

#### 1.4. Emergency telephone number

Emergency number : (844) 523-4086 (3E Company - Account 10069)

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS US classification

|   |      |   |
|---|------|---|
| Flammable liquids Category 2  | H225 | Highly flammable liquid and vapor               |
| Skin corrosion/irritation Category 2  | H315 | Causes skin irritation                          |
| Serious eye damage/eye irritation Category 2A   | H319 | Causes serious eye irritation                   |
| Specific target organ toxicity – Single exposure, Category 3,<br>Respiratory tract irritation | H335 | May cause respiratory irritation                |
| Hazardous to the aquatic environment – Acute Hazard Category 2                                | H401 | Toxic to aquatic life                           |
| Hazardous to the aquatic environment – Chronic Hazard Category 2                              | H411 | Toxic to aquatic life with long lasting effects |

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) : H225 - Highly flammable liquid and vapor  
 H315 - Causes skin irritation  
 H319 - Causes serious eye irritation

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|                                   |   |
|-----------------------------------|---|
| Precautionary statements (GHS US) | : H335 - May cause respiratory irritation<br>H411 - Toxic to aquatic life with long lasting effects<br>P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.<br>P233 - Keep container tightly closed.<br>P240 - Ground/Bond container and receiving equipment.<br>P241 - Use explosion-proof electrical/ventilating/lighting equipment<br>P242 - Use only non-sparking tools.<br>P243 - Take precautionary measures against static discharge.<br>P261 - Avoid breathing fumes, mist, spray, vapors.<br>P264 - Wash skin thoroughly after handling<br>P271 - Use only outdoors or in a well-ventilated area.<br>P273 - Avoid release to the environment.<br>P280 - Wear protective gloves/protective clothing/eye protection/face protection.<br>P302+P352 - If on skin: Wash with plenty of soap and water<br>P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.<br>P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing.<br>P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.<br>P312 - Call a POISON CENTER or doctor/physician if you feel unwell<br>P321 - Specific treatment (see supplemental first aid instructions on this label)<br>P332+P313 - If skin irritation occurs: Get medical advice/attention.<br>P337+P313 - If eye irritation persists: Get medical advice/attention.<br>P362+P364 - Take off contaminated clothing and wash it before reuse.<br>P370+P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish<br>P391 - Collect spillage.<br>P403+P233 - Store in a well-ventilated place. Keep container tightly closed.<br>P403+P235 - Store in a well-ventilated place. Keep cool.<br>P405 - Store locked up.<br>P501 - Dispose of contents/container to an approved waste disposal plant |
|-----------------------------------|---|

### 2.3. Other hazards which do not result in classification

No additional information available

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

Not applicable

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Substance type : Mono-constituent

| Name  | Product identifier | %     | GHS US classification   |
|---|--------------------|-------|---|
| Bis(ethoxy)dimethylsilane<br>(Main constituent) | CAS-No.: 78-62-6   | ≤ 100 | Flam. Liq. 2, H225<br>Skin Irrit. 2, H315<br>Eye Irrit. 2A, H319<br>STOT SE 3, H335<br>Aquatic Acute 2, H401<br>Aquatic Chronic 2, H411 |

Full text of hazard classes and H-statements : see section 16

### 3.2. Mixtures

Not applicable

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### SECTION 4: First-aid measures

#### 4.1. Description of first aid measures

|                                       |   |
|---------------------------------------|---|
| First-aid measures general            | : In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Move the affected personnel away from the contaminated area.          |
| First-aid measures after inhalation   | : Remove person to fresh air and keep comfortable for breathing. If not breathing, give artificial respiration. Get immediate medical advice/attention.                             |
| 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    | : Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth out with water. Get immediate medical advice/attention.                                |

#### 4.2. Most important symptoms and effects (acute and delayed)

|                  |  |
|------------------|--|
| Symptoms/effects | : The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11. |
|------------------|--|

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

Treat symptomatically.

### SECTION 5: Fire-fighting measures

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

|                              |   |
|------------------------------|---|
| Suitable extinguishing media | : Dry powder. Use extinguishing media appropriate for surrounding fire. |
|------------------------------|---|

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

|                  |   |
|------------------|---|
| Fire hazard      | : Thermal decomposition generates: Carbon oxides. Silicon oxides.   |
| Explosion hazard | : Risk of explosion if heated under confinement. Use water spray or fog for cooling exposed containers. May form flammable/explosive vapor-air mixture. |

#### 5.3. Special protective equipment and precautions for fire-fighters

|                                |  |
|--------------------------------|--|
| Firefighting instructions      | : In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.  |
| Protection during firefighting | : Wear gas tight chemically protective clothing in combination with self contained breathing apparatus. For further information refer to section 8: "Exposure controls/personal protection". |

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

|                  |   |
|------------------|---|
| General measures | : Evacuate unnecessary personnel. Ensure adequate air ventilation. Do not breathe gas, fumes, vapor or spray. |
|------------------|---|

##### 6.1.1. For non-emergency personnel

|                      |   |
|----------------------|---|
| Emergency procedures | : Only qualified personnel equipped with suitable protective equipment may intervene. |
|----------------------|---|

##### 6.1.2. For emergency responders

|                      |  |
|----------------------|--|
| Protective equipment | : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".  |
| Emergency procedures | : Gas/vapor heavier than air. May accumulate in confined spaces, particularly at or below ground level. Consider the risk of potentially explosive atmospheres. Eliminate every possible source of ignition. |

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### 6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

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

|                         |   |
|-------------------------|---|
| For containment         | : Stop leak if safe to do so. Dike for recovery or absorb with appropriate material.  |
| Methods for cleaning up | : Take up large spills with pump or vacuum and finish with dry chemical absorbent. Use explosion-proof equipment. Take up small spills with dry chemical absorbent. Sweep or shovel spills into appropriate container for disposal. Ventilate area. |
| Other information       | : For disposal of solid materials or residues refer to section 13 : "Disposal considerations".  |

### 6.4. Reference to other sections

No additional information available

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

|                                   |   |
|-----------------------------------|---|
| Additional hazards when processed | : Handle empty containers with care because residual vapors are flammable.  |
| Precautions for safe handling     | : Do not handle until all safety precautions have been read and understood. Ensure good ventilation of the work station. Do not breathe fumes, mist, spray, vapors. Wear personal protective equipment. Avoid contact with skin and eyes. Keep away from ignition sources (including static discharges). Proper grounding procedures to avoid static electricity should be followed. Use only non-sparking tools. |
| Hygiene measures                  | : Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.  |

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

|                        |  |
|------------------------|--|
| Technical measures     | : Comply with applicable regulations.  |
| Storage conditions     | : Keep container closed when not in use. Keep away from ignition sources. Moisture sensitive. Keep contents under inert gas. |
| Incompatible materials | : Refer to Section 10 on Incompatible Materials.   |
| Heat-ignition          | : Heat sensitive.  |
| Storage area           | : Store in dry, well-ventilated area. Light sensitive.   |

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Bis(ethoxy)dimethylsilane (78-62-6)

No additional information available

### 8.2. Appropriate engineering controls

|                                  |   |
|----------------------------------|---|
| Appropriate engineering controls | : Ensure good ventilation of the work station. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. |
|----------------------------------|---|

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### 8.3. Individual protection measures/Personal protective equipment

#### Hand protection:

protective gloves. 29 CFR 1910.138: Hand Protection

#### Eye protection:

Chemical goggles or safety glasses. Face shield. 29 CFR 1910.133: Eye and Face Protection

#### Skin and body protection:

Wear suitable protective clothing

#### Respiratory protection:

In case of inadequate ventilation wear respiratory protection. 29 CFR 1910.134: Respiratory Protection

#### Other information:

Safety shoes. 29 CFR 1910.136: Foot Protection.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

|   |                       |
|---|-----------------------|
| Physical state                                  | : Liquid              |
| Color   | : No data available   |
| Odor  | : No data available   |
| Odor threshold                                  | : No data available   |
| pH  | : No data available   |
| Melting point                                   | : -70 °C              |
| Freezing point                                  | : No data available   |
| Boiling point                                   | : 114 – 115 °C        |
| Flash point                                     | : 11 °C               |
| Relative evaporation rate (butyl acetate=1)     | : No data available   |
| Flammability (solid, gas)                       | : No data available   |
| Vapor pressure                                  | : No data available   |
| Relative vapor density at 20 °C                 | : No data available   |
| Relative density                                | : No data available   |
| Density   | : 0.89 g/ml (@ 20 °C) |
| Molecular mass                                  | : 148.2755 g/mol      |
| Solubility                                      | : No data available   |
| Partition coefficient n-octanol/water (Log Pow) | : No data available   |
| Auto-ignition temperature                       | : No data available   |
| Decomposition temperature                       | : No data available   |
| Viscosity, kinematic                            | : No data available   |
| Viscosity, dynamic                              | : No data available   |
| Explosion limits                                | : No data available   |
| Explosive properties                            | : No data available   |
| Oxidizing properties                            | : No data available   |

### 9.2. Other information

Refractive index : 1.3839 (@ 20 °C)

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

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### 10.2. Chemical stability

The product is stable at normal handling and storage conditions.

### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid

Keep away from heat, sparks and flame.

### 10.5. Incompatible materials

Strong acids. Strong oxidizing agents.

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Hazardous decomposition products in case of fire, see Section 5.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified.  
Acute toxicity (dermal) : Not classified.  
Acute toxicity (inhalation) : Not classified.

#### Bis(ethoxy)dimethylsilane (78-62-6)

|                       |  |
|-----------------------|--|
| LD50 oral rat         | 9280 mg/kg                               |
| LD50 dermal rabbit    | 13840 mg/kg                              |
| LC50 Inhalation - Rat | 20 g/m <sup>3</sup> (Exposure time: 8 h) |
| ATE US (oral)         | 9280 mg/kg body weight                   |
| ATE US (vapors)       | 20 mg/l/4h                               |
| ATE US (dust, mist)   | 20 mg/l/4h                               |

Skin corrosion/irritation : Causes skin irritation.  
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  
STOT-single exposure : May cause respiratory irritation.  
STOT-repeated exposure : Not classified  
Aspiration hazard : Not classified  
Viscosity, kinematic : No data available  
Symptoms/effects : The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.

## SECTION 12: Ecological information

### 12.1. Toxicity

No additional information available

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### 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

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Waste treatment methods : Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber.  
Product/Packaging disposal recommendations : Dispose of contents/container in accordance with licensed collector's sorting instructions.  
Additional information : Recycle the material as far as possible.

## SECTION 14: Transport information

### 14.1. UN number

DOT NA No : UN2380  
UN-No. (TDG) : Not applicable  
UN-No. (IMDG) : 2380  
UN-No. (IATA) : 2380

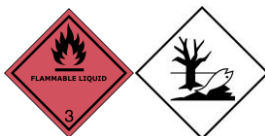
### 14.2. UN proper shipping name

Proper Shipping Name (DOT) : Dimethyldiethoxysilane  
Proper Shipping Name (TDG) : Not applicable  
Proper Shipping Name (IMDG) : DIMETHYLDIETHOXYSILANE  
Proper Shipping Name (IATA) : Dimethyldiethoxysilane

### 14.3. Transport hazard class(es)

#### DOT

Transport hazard class(es) (DOT) : 3  
Hazard labels (DOT) : 3



#### TDG

Transport hazard class(es) (TDG) : Not applicable

#### IMDG

Transport hazard class(es) (IMDG) : 3  
Hazard labels (IMDG) : 3

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### IATA

Transport hazard class(es) (IATA) : 3

Hazard labels (IATA) : 3



### 14.4. Packing group

Packing group (DOT) : II  
Packing group (TDG) : Not applicable  
Packing group (IMDG) : II  
Packing group (IATA) : II

### 14.5. Environmental hazards

Dangerous for the environment : Yes  
Marine pollutant : Yes



Other information : No supplementary information available.

### 14.6. Special precautions for user

#### DOT

UN-No.(DOT) : UN2380  
DOT Special Provisions (49 CFR 172.102) : IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized.  
T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3)  
TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling =  $97 / 1 + a (tr - tf)$  Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.  
DOT Packaging Exceptions (49 CFR 173.xxx) : 150  
DOT Packaging Non Bulk (49 CFR 173.xxx) : 202  
DOT Packaging Bulk (49 CFR 173.xxx) : 242  
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 5 L  
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 60 L  
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.

#### TDG

Emergency Response Guide (ERG) Number : 127



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| <b>IMDG</b>                        |  |
|------------------------------------|--|
| Limited quantities (IMDG)          | : 1 L  |
| Excepted quantities (IMDG)         | : E2   |
| Packing instructions (IMDG)        | : P001   |
| IBC packing instructions (IMDG)    | : IBC02  |
| Tank instructions (IMDG)           | : T4   |
| Tank special provisions (IMDG)     | : TP1  |
| EmS-No. (Fire)                     | : F-E - FIRE SCHEDULE Echo - NON-WATER-REACTIVE FLAMMABLE LIQUIDS  |
| EmS-No. (Spillage)                 | : S-D - SPILLAGE SCHEDULE Delta - FLAMMABLE LIQUIDS  |
| Stowage category (IMDG)            | : B  |
| Flash point (IMDG)                 | : 13°C c.c.  |
| Properties and observations (IMDG) | : Colourless liquid. Flashpoint: 13°C c.c. Miscible with water. Irritating to skin, eyes and mucous membranes. |

| <b>IATA</b>                                  |        |
|--|--------|
| PCA Excepted quantities (IATA)               | : E2   |
| PCA Limited quantities (IATA)                | : Y341 |
| PCA limited quantity max net quantity (IATA) | : 1L   |
| PCA packing instructions (IATA)              | : 353  |
| PCA max net quantity (IATA)                  | : 5L   |
| CAO packing instructions (IATA)              | : 364  |
| CAO max net quantity (IATA)                  | : 60L  |
| ERG code (IATA)                              | : 3L   |

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory, except for:

|                           |                 |      |
|---------------------------|-----------------|------|
| Bis(ethoxy)dimethylsilane | CAS-No. 78-62-6 | 100% |
|---------------------------|-----------------|------|

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### 15.2. International regulations

#### CANADA

##### Bis(ethoxy)dimethylsilane (78-62-6)

Listed on the Canadian DSL (Domestic Substances List)

#### EU-Regulations

##### Bis(ethoxy)dimethylsilane (78-62-6)

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

#### National regulations

##### Bis(ethoxy)dimethylsilane (78-62-6)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active  
Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Listed on the Japanese ENCS (Existing New Chemical Substances) inventory  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on NZIoC (New Zealand Inventory of Chemicals)  
Listed on KECL/KECI (Korean Existing Chemicals Inventory)  
Listed on the Japanese ISHL (Industrial Safety and Health Law)  
Listed on INSQ (Mexican National Inventory of Chemical Substances)  
Listed on the TCSI (Taiwan Chemical Substance Inventory)  
Listed on the NCI (Vietnam - National Chemical Inventory)

### 15.3. US State regulations

##### Bis(ethoxy)dimethylsilane (78-62-6)

State or local regulations

U.S. - New Jersey - Right to Know Hazardous Substance List

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

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#### Full text of H-phrases

|      |   |
|------|---|
| H225 | Highly flammable liquid and vapor               |
| H315 | Causes skin irritation                          |
| H319 | Causes serious eye irritation                   |
| H335 | May cause respiratory irritation                |
| H401 | Toxic to aquatic life                           |
| H411 | Toxic to aquatic life with long lasting effects |

NFPA health hazard

: 3 - Materials that, under emergency conditions, can cause serious or permanent injury.

NFPA fire hazard

: 3 - Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature conditions.

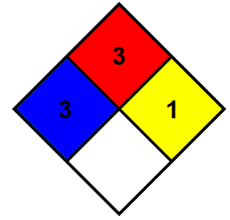
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NFPA reactivity : 1 - Materials that in themselves are normally stable but can become unstable at elevated temperatures and pressures.



### Hazard Rating

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

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.

### Safety Data Sheet (SDS), USA

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is offered solely for your consideration, investigation, and verification. It does not represent any guarantee of the properties of the product nor that the hazard precautions or procedures described are the only ones which exist. SynQuest shall not be held liable or any damage resulting from handling or from contact with the above product.