



## 4-(AZIDOSULFONYL)PHENETHYLTRIMETHOXYSILANE, 22-25% in methanol/toluene

Safety Data Sheet SIA0790.0

Date of issue: 06/10/2015

Version: 1.0

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

#### 1.1. Product identifier

|                 |  |
|-----------------|--|
| Product form    | : Mixture  |
| Physical state  | : Liquid   |
| Product name    | : 4-(AZIDOSULFONYL)PHENETHYLTRIMETHOXYSILANE, 22-25% in methanol/toluene                             |
| Product code    | : SIA0790.0  |
| Formula         | : C <sub>11</sub> H <sub>17</sub> N <sub>3</sub> O <sub>5</sub> Si                                   |
| Synonyms        | : 4-[2-(TRIMETHOXYSILYL)ETHYL]-1-BENZENESULFONYL AZIDE; 2-(TRIMETHOXYSILYL)ETHYLPHENYLSULFONYL AZIDE |
| Chemical family | : ORGANOSILANE IN SOLVENT  |

#### 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.

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Morrisville, PA 19067

##### USA

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[info@gelest.com](mailto:info@gelest.com) - [www.gelest.com](http://www.gelest.com)

##### GELEST INC.

Fritz-Klatte-Strasse 8  
65933 Frankfurt

##### Germany

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[info@gelestde.com](mailto:info@gelestde.com) - [www.gelestde.com](http://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]

|  |      |
|--|------|
| Flammable liquids, Category 3  | H226 |
| Acute toxicity (oral), Category 3                                      | H301 |
| Acute toxicity (dermal), Category 3                                    | H311 |
| Acute toxicity (inhalation:vapour) Category 3                          | H331 |
| Skin corrosion/irritation, Category 2                                  | H315 |
| Serious eye damage/eye irritation, Category 2                          | H319 |
| Reproductive toxicity, Category 2                                      | H361 |
| Specific target organ toxicity — single exposure, Category 1           | H370 |
| Specific target organ toxicity — Single exposure, Category 3, Narcosis | H336 |
| Specific target organ toxicity — Repeated exposure, Category 2         | H373 |
| Full text of H statements : see section 16                             |      |

##### Adverse physicochemical, human health and environmental effects

No additional information available

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### 2.2. Label elements

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

Hazard pictograms (CLP)



Signal word (CLP)

: Danger

Hazardous ingredients

: Methanol; Toluene

Hazard statements (CLP)

: H226 - Flammable liquid and vapour.  
H301+H311+H331 - Toxic if swallowed, in contact with skin or if inhaled  
H315 - Causes skin irritation.  
H319 - Causes serious eye irritation.  
H336 - May cause drowsiness or dizziness.  
H361 - Suspected of damaging fertility or the unborn child.  
H370 - Causes damage to organs.  
H373 - May cause damage to organs through prolonged or repeated exposure.  
P202 - Do not handle until all safety precautions have been read and understood.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P240 - Ground/bond container and receiving equipment.  
P271 - Use only outdoors or in a well-ventilated area.  
P308+P311 - IF exposed or concerned: Call a POISON CENTER.

Precautionary statements (CLP)

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

| Name  | Product identifier  | %       | Classification according to Regulation (EC) No. 1272/2008 [CLP]  |
|---|---|---------|--|
| Methanol  | (CAS-No.) 67-56-1<br>(EC-No.) 200-659-6<br>(EC Index-No.) 603-001-00-X                                      | 35 - 40 | Flam. Liq. 2, H225<br>Acute Tox. 3 (Oral), H301<br>Acute Tox. 3 (Dermal), H311<br>Acute Tox. 3 (Inhalation:vapour), H331<br>STOT SE 1, H370                      |
| Toluene   | (CAS-No.) 108-88-3<br>(EC-No.) 203-625-9<br>(EC Index-No.) 601-021-00-3<br>(REACH-no) 01-2119471310-51-0127 | 35 - 40 | Flam. Liq. 2, H225<br>Acute Tox. 4 (Inhalation:vapour), H332<br>Skin Irrit. 2, H315<br>Repr. 2, H361d<br>STOT SE 3, H336<br>STOT RE 2, H373<br>Asp. Tox. 1, H304 |
| 4-(2-Trimethoxysilylethyl)benzenesulfonyl azide | (CAS-No.) 68479-60-7<br>(EC-No.) 270-862-2  | 20 - 30 | Skin Irrit. 2, H315<br>Eye Irrit. 2, H319  |

#### Specific concentration limits:

| Name     | Product identifier   | Specific concentration limits                                    |
|----------|--|--|
| Methanol | (CAS-No.) 67-56-1<br>(EC-No.) 200-659-6<br>(EC Index-No.) 603-001-00-X | ( 3 =<C < 10) STOT SE 2, H371<br>( 10 =<C < 100) STOT SE 1, H370 |

Full text of H-statements: see section 16

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### 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. Immediately call a POISON CENTER/doctor.  |

#### 4.2. Most important symptoms and effects, both acute and delayed

|                                     |   |
|-------------------------------------|---|
| Symptoms/effects                    | : Causes damage to organs. Suspected of damaging fertility or the unborn child. May cause damage to organs.   |
| Symptoms/effects after inhalation   | : Toxic if inhaled. Danger of serious damage to health by prolonged exposure through inhalation. May cause drowsiness or dizziness. May cause irritation to the respiratory tract. Overexposure may cause: Nausea. Headache. Visual disturbances. Cough. Impairment of coordination, distorted perception and CNS disturbances have been reported for toluene intoxication. Vapor inhalation of toluene may lead to impairment of coordination mental alertness, and reaction times, leading to accident proneness. |
| Symptoms/effects after skin contact | : Toxic in contact with skin. Causes skin irritation. Repeated exposure to this material can result in absorption through skin causing significant health hazard.   |
| Symptoms/effects after eye contact  | : Causes serious eye damage.  |
| Symptoms/effects after ingestion    | : Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard. Oral toxicity is associated with methanol, the solvent and a hydrolysis product which causes nausea, vomiting, headache, visual effects including blindness. Onset of symptoms may be delayed up to 48 hours.  |
| Chronic symptoms                    | : Methanol may effect the central nervous system resulting in persistent or recurring headaches or impaired vision. On contact with water this compound liberates methanol which is known to have a chronic effect on the central nervous system.   |

#### 4.3. Indication of any immediate medical attention and special treatment needed

NOTE TO PHYSICIAN: 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: Firefighting measures

#### 5.1. Extinguishing media

|                                |  |
|--------------------------------|--|
| Suitable extinguishing media   | : Water spray. Foam. Carbon dioxide. Dry chemical. |
| Unsuitable extinguishing media | : Do not use straight streams.                     |

#### 5.2. Special hazards arising from the substance or mixture

|                  |  |
|------------------|--|
| Fire hazard      | : Flammable liquid and vapour. Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame. |
| Explosion hazard | : May form flammable/explosive vapour-air mixture.   |

#### 5.3. Advice for firefighters

|                                |  |
|--------------------------------|--|
| Firefighting instructions      | : Use water spray to cool exposed surfaces. 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 vapour and mist. |

### SECTION 6: Accidental release measures

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

|                  |   |
|------------------|---|
| General measures | : Eliminate every possible source of ignition. 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 : 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.

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 : Handle empty containers with care because residual vapours are flammable. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Precautions for safe handling : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid all eye and skin contact and do not breathe vapour and mist. Ground/bond container and receiving equipment. Take precautionary measures against static discharge. Use only outdoors or in a well-ventilated area. Vent containers slowly while grounded. Use only non-sparking tools.

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 : Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof ventilating equipment.

Storage conditions : Keep container tightly closed. Store in sealed containers below 30°C. Store locked up. Keep in a cool place.

Incompatible materials : Acids. alcohols. Amines. Moisture. Oxidizing agent. Peroxides. Water.

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

| Methanol (67-56-1) |   |  |
|--------------------|---|--|
| EU                 | IOELV TWA (mg/m <sup>3</sup> )                                  | 260 mg/m <sup>3</sup>  |
| EU                 | IOELV TWA (ppm)   | 200 ppm  |
| Austria            | MAK (mg/m <sup>3</sup> )  | 260 mg/m <sup>3</sup>  |
| Austria            | MAK (ppm)   | 200 ppm  |
| Austria            | MAK Short time value (mg/m <sup>3</sup> )                       | 1040 mg/m <sup>3</sup>   |
| Austria            | MAK Short time value (ppm)                                      | 800 ppm  |
| Belgium            | Limit value (mg/m <sup>3</sup> )                                | 266 mg/m <sup>3</sup>  |
| Belgium            | Limit value (ppm)   | 200 ppm  |
| Belgium            | Short time value (mg/m <sup>3</sup> )                           | 333 mg/m <sup>3</sup>  |
| Belgium            | Short time value (ppm)  | 250 ppm  |
| Bulgaria           | OEL TWA (mg/m <sup>3</sup> )                                    | 260 mg/m <sup>3</sup>  |
| Bulgaria           | OEL TWA (ppm)   | 200 ppm  |
| Cyprus             | OEL TWA (mg/m <sup>3</sup> )                                    | 260 mg/m <sup>3</sup>  |
| Cyprus             | OEL TWA (ppm)   | 200 ppm  |
| France             | VLE (mg/m <sup>3</sup> )  | 1300 mg/m <sup>3</sup>   |
| France             | VLE (ppm)   | 1000 ppm   |
| France             | VME (mg/m <sup>3</sup> )  | 260 mg/m <sup>3</sup> (restrictive limit)  |
| France             | VME (ppm)   | 200 ppm (restrictive limit)  |
| Germany            | TRGS 900 Occupational exposure limit value (mg/m <sup>3</sup> ) | 270 mg/m <sup>3</sup> (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed) |

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| Methanol (67-56-1)           |  |   |
|------------------------------|--|---|
| Germany                      | TRGS 900 Occupational exposure limit value (ppm) | 200 ppm (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)  |
| Germany                      | TRGS 903 Biological limit value                  | 30 mg/l (Medium: urine - Time: end of shift - Parameter: Methanol)<br>30 mg/l (Medium: urine - Time: end of several shifts - Parameter: Methanol (for long-term exposures)) |
| Gibraltar                    | Eight hours mg/m <sup>3</sup>                    | 260 mg/m <sup>3</sup>   |
| Gibraltar                    | Eight hours ppm                                  | 200 ppm   |
| Greece                       | OEL TWA (mg/m <sup>3</sup> )                     | 260 mg/m <sup>3</sup>   |
| Greece                       | OEL TWA (ppm)                                    | 200 ppm   |
| Greece                       | OEL STEL (mg/m <sup>3</sup> )                    | 325 mg/m <sup>3</sup>   |
| Greece                       | OEL STEL (ppm)                                   | 250 ppm   |
| Italy - Portugal - USA ACGIH | ACGIH TWA (ppm)                                  | 200 ppm   |
| Italy - Portugal - USA ACGIH | ACGIH STEL (ppm)                                 | 250 ppm   |
| Italy                        | OEL TWA (mg/m <sup>3</sup> )                     | 260 mg/m <sup>3</sup>   |
| Italy                        | OEL TWA (ppm)                                    | 200 ppm   |
| Latvia                       | OEL TWA (mg/m <sup>3</sup> )                     | 260 mg/m <sup>3</sup>   |
| Latvia                       | OEL TWA (ppm)                                    | 200 ppm   |
| USA IDLH                     | US IDLH (ppm)                                    | 6000 ppm  |
| USA NIOSH                    | NIOSH REL (TWA) (mg/m <sup>3</sup> )             | 260 mg/m <sup>3</sup>   |
| USA NIOSH                    | NIOSH REL (TWA) (ppm)                            | 200 ppm   |
| USA NIOSH                    | NIOSH REL (STEL) (mg/m <sup>3</sup> )            | 325 mg/m <sup>3</sup>   |
| USA NIOSH                    | NIOSH REL (STEL) (ppm)                           | 250 ppm   |
| USA OSHA                     | OSHA PEL (TWA) (mg/m <sup>3</sup> )              | 260 mg/m <sup>3</sup>   |
| USA OSHA                     | OSHA PEL (TWA) (ppm)                             | 200 ppm   |
| Spain                        | VLA-ED (mg/m <sup>3</sup> )                      | 266 mg/m <sup>3</sup> (indicative limit value)  |
| Spain                        | VLA-ED (ppm)                                     | 200 ppm (indicative limit value)  |
| Switzerland                  | KZGW (mg/m <sup>3</sup> )                        | 1040 mg/m <sup>3</sup>  |
| Switzerland                  | KZGW (ppm)                                       | 800 ppm   |
| Switzerland                  | MAK (mg/m <sup>3</sup> )                         | 260 mg/m <sup>3</sup>   |
| Switzerland                  | MAK (ppm)  | 200 ppm   |
| Netherlands                  | Grenswaarde TGG 8H (mg/m <sup>3</sup> )          | 133 mg/m <sup>3</sup>   |
| Netherlands                  | Grenswaarde TGG 8H (ppm)                         | 100 ppm   |
| United Kingdom               | WEL TWA (mg/m <sup>3</sup> )                     | 266 mg/m <sup>3</sup>   |
| United Kingdom               | WEL TWA (ppm)                                    | 200 ppm   |
| United Kingdom               | WEL STEL (mg/m <sup>3</sup> )                    | 333 mg/m <sup>3</sup>   |
| United Kingdom               | WEL STEL (ppm)                                   | 250 ppm   |
| Czech Republic               | Expoziční limity (PEL) (mg/m <sup>3</sup> )      | 250 mg/m <sup>3</sup>   |
| Denmark                      | Grænseværdie (langvarig) (mg/m <sup>3</sup> )    | 260 mg/m <sup>3</sup>   |
| Denmark                      | Grænseværdie (langvarig) (ppm)                   | 200 ppm   |
| Finland                      | HTP-arvo (8h) (mg/m <sup>3</sup> )               | 270 mg/m <sup>3</sup>   |
| Finland                      | HTP-arvo (8h) (ppm)                              | 200 ppm   |
| Finland                      | HTP-arvo (15 min)                                | 330 mg/m <sup>3</sup>   |
| Finland                      | HTP-arvo (15 min) (ppm)                          | 250 ppm   |
| Hungary                      | AK-érték   | 260 mg/m <sup>3</sup>   |
| Ireland                      | OEL (8 hours ref) (mg/m <sup>3</sup> )           | 260 mg/m <sup>3</sup>   |
| Ireland                      | OEL (8 hours ref) (ppm)                          | 200 ppm   |
| Ireland                      | OEL (15 min ref) (mg/m <sup>3</sup> )            | 780 mg/m <sup>3</sup> (calculated)  |
| Ireland                      | OEL (15 min ref) (ppm)                           | 600 ppm (calculated)  |
| Lithuania                    | IPRV (mg/m <sup>3</sup> )                        | 260 mg/m <sup>3</sup>   |
| Lithuania                    | IPRV (ppm)                                       | 200 ppm   |



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| Methanol (67-56-1) |  |  |
|--------------------|--|--|
| Malta              | OEL TWA (mg/m <sup>3</sup> )                       | 260 mg/m <sup>3</sup>  |
| Malta              | OEL TWA (ppm)                                      | 200 ppm  |
| Norway             | Grenseverdier (AN) (mg/m <sup>3</sup> )            | 130 mg/m <sup>3</sup>  |
| Norway             | Grenseverdier (AN) (ppm)                           | 100 ppm  |
| Norway             | Grenseverdier (Korttidsverdi) (mg/m <sup>3</sup> ) | 130 mg/m <sup>3</sup>  |
| Norway             | Grenseverdier (Korttidsverdi) (ppm)                | 100 ppm  |
| Poland             | NDS (mg/m <sup>3</sup> )                           | 100 mg/m <sup>3</sup>  |
| Poland             | NDSch (mg/m <sup>3</sup> )                         | 300 mg/m <sup>3</sup>  |
| Romania            | OEL TWA (mg/m <sup>3</sup> )                       | 260 mg/m <sup>3</sup>  |
| Romania            | OEL TWA (ppm)                                      | 200 ppm  |
| Romania            | OEL STEL (ppm)                                     | 5 ppm  |
| Slovakia           | NPHV (priemerná) (mg/m <sup>3</sup> )              | 260 mg/m <sup>3</sup>  |
| Slovakia           | NPHV (priemerná) (ppm)                             | 200 ppm  |
| Sweden             | nivågränsvärde (NVG) (mg/m <sup>3</sup> )          | 250 mg/m <sup>3</sup>  |
| Sweden             | nivågränsvärde (NVG) (ppm)                         | 200 ppm  |
| Sweden             | kortidsvärde (KTV) (mg/m <sup>3</sup> )            | 350 mg/m <sup>3</sup>  |
| Sweden             | kortidsvärde (KTV) (ppm)                           | 250 ppm  |
| Canada (Quebec)    | VECD (mg/m <sup>3</sup> )                          | 328 mg/m <sup>3</sup>  |
| Canada (Quebec)    | VECD (ppm)   | 250 ppm  |
| Canada (Quebec)    | VEMP (mg/m <sup>3</sup> )                          | 262 mg/m <sup>3</sup>  |
| Canada (Quebec)    | VEMP (ppm)   | 200 ppm  |
| Australia          | TWA (mg/m <sup>3</sup> )                           | 262 mg/m <sup>3</sup>  |
| Australia          | TWA (ppm)  | 200 ppm  |
| Australia          | STEL (mg/m <sup>3</sup> )                          | 328 mg/m <sup>3</sup>  |
| Australia          | STEL (ppm)   | 250 ppm  |
| Portugal           | OEL TWA (mg/m <sup>3</sup> )                       | 260 mg/m <sup>3</sup> (indicative limit value)                 |
| Portugal           | OEL TWA (ppm)                                      | 200 ppm (indicative limit value)                               |
| Portugal           | OEL STEL (ppm)                                     | 250 ppm  |
| Portugal           | OEL chemical category (PT)                         | skin - potential for cutaneous exposure indicative limit value |
| Toluene (108-88-3) |  |  |
| EU                 | IOELV TWA (mg/m <sup>3</sup> )                     | 192 mg/m <sup>3</sup>  |
| EU                 | IOELV TWA (ppm)                                    | 50 ppm   |
| EU                 | IOELV STEL (mg/m <sup>3</sup> )                    | 384 mg/m <sup>3</sup>  |
| EU                 | IOELV STEL (ppm)                                   | 100 ppm  |
| Austria            | MAK (mg/m <sup>3</sup> )                           | 190 mg/m <sup>3</sup>  |
| Austria            | MAK (ppm)  | 50 ppm   |
| Austria            | MAK Short time value (mg/m <sup>3</sup> )          | 380 mg/m <sup>3</sup>  |
| Austria            | MAK Short time value (ppm)                         | 100 ppm  |
| Belgium            | Limit value (mg/m <sup>3</sup> )                   | 77 mg/m <sup>3</sup>   |
| Belgium            | Limit value (ppm)                                  | 20 ppm   |
| Belgium            | Short time value (mg/m <sup>3</sup> )              | 384 mg/m <sup>3</sup>  |
| Belgium            | Short time value (ppm)                             | 100 ppm  |
| Bulgaria           | OEL TWA (mg/m <sup>3</sup> )                       | 192 mg/m <sup>3</sup>  |
| Bulgaria           | OEL TWA (ppm)                                      | 50 ppm   |
| Bulgaria           | OEL STEL (mg/m <sup>3</sup> )                      | 384 mg/m <sup>3</sup>  |
| Bulgaria           | OEL STEL (ppm)                                     | 100 ppm  |
| Cyprus             | OEL TWA (mg/m <sup>3</sup> )                       | 192 mg/m <sup>3</sup>  |
| Cyprus             | OEL TWA (ppm)                                      | 50 ppm   |
| Cyprus             | OEL STEL (mg/m <sup>3</sup> )                      | 384 mg/m <sup>3</sup>  |
| Cyprus             | OEL STEL (ppm)                                     | 100 ppm  |
| France             | VLE (mg/m <sup>3</sup> )                           | 384 mg/m <sup>3</sup> (restrictive limit)                      |
| France             | VLE (ppm)  | 100 ppm (restrictive limit)                                    |
| France             | VME (mg/m <sup>3</sup> )                           | 76.8 mg/m <sup>3</sup> (restrictive limit)                     |

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| Toluene (108-88-3)           |   |   |
|------------------------------|---|---|
| France                       | VME (ppm)   | 20 ppm (restrictive limit)  |
| Germany                      | TRGS 900 Occupational exposure limit value (mg/m <sup>3</sup> ) | 190 mg/m <sup>3</sup> (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)  |
| Germany                      | TRGS 900 Occupational exposure limit value (ppm)                | 50 ppm (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)   |
| Germany                      | TRGS 903 Biological limit value                                 | 600 µg/l (Medium: whole blood - Time: end of shift - Parameter: Toluene)<br>1.5 mg/l (Medium: urine - Time: end of several shifts - Parameter: o-Cresol (after hydrolysis)) |
| Gibraltar                    | Eight hours mg/m <sup>3</sup>                                   | 192 mg/m <sup>3</sup>   |
| Gibraltar                    | Eight hours ppm   | 50 ppm  |
| Gibraltar                    | Short-term mg/m <sup>3</sup>                                    | 384 mg/m <sup>3</sup>   |
| Gibraltar                    | Short-term ppm  | 100 ppm   |
| Greece                       | OEL TWA (mg/m <sup>3</sup> )                                    | 192 mg/m <sup>3</sup>   |
| Greece                       | OEL TWA (ppm)   | 50 ppm  |
| Greece                       | OEL STEL (mg/m <sup>3</sup> )                                   | 384 mg/m <sup>3</sup>   |
| Greece                       | OEL STEL (ppm)  | 100 ppm   |
| Italy - Portugal - USA ACGIH | ACGIH TWA (ppm)   | 20 ppm  |
| Italy                        | OEL TWA (mg/m <sup>3</sup> )                                    | 192 mg/m <sup>3</sup>   |
| Italy                        | OEL TWA (ppm)   | 50 ppm  |
| Latvia                       | OEL TWA (mg/m <sup>3</sup> )                                    | 50 mg/m <sup>3</sup>  |
| Latvia                       | OEL TWA (ppm)   | 14 ppm  |
| USA IDLH                     | US IDLH (ppm)   | 500 ppm   |
| USA NIOSH                    | NIOSH REL (TWA) (mg/m <sup>3</sup> )                            | 375 mg/m <sup>3</sup>   |
| USA NIOSH                    | NIOSH REL (TWA) (ppm)   | 100 ppm   |
| USA NIOSH                    | NIOSH REL (STEL) (mg/m <sup>3</sup> )                           | 560 mg/m <sup>3</sup>   |
| USA NIOSH                    | NIOSH REL (STEL) (ppm)  | 150 ppm   |
| USA OSHA                     | OSHA PEL (TWA) (ppm)  | 200 ppm   |
| USA OSHA                     | OSHA PEL (Ceiling) (ppm)  | 300 ppm   |
| Spain                        | VLA-ED (mg/m <sup>3</sup> )                                     | 192 mg/m <sup>3</sup> (indicative limit value; manufacturing, commercialization, and use restrictions under REACH)  |
| Spain                        | VLA-ED (ppm)  | 50 ppm (indicative limit value; manufacturing, commercialization, and use restrictions under REACH)   |
| Spain                        | VLA-EC (mg/m <sup>3</sup> )                                     | 384 mg/m <sup>3</sup>   |
| Spain                        | VLA-EC (ppm)  | 100 ppm   |
| Switzerland                  | KZGW (mg/m <sup>3</sup> )                                       | 760 mg/m <sup>3</sup>   |
| Switzerland                  | KZGW (ppm)  | 200 ppm   |
| Switzerland                  | MAK (mg/m <sup>3</sup> )  | 190 mg/m <sup>3</sup>   |
| Switzerland                  | MAK (ppm)   | 50 ppm  |
| Netherlands                  | Grenswaarde TGG 8H (mg/m <sup>3</sup> )                         | 150 mg/m <sup>3</sup>   |
| Netherlands                  | Grenswaarde TGG 15MIN (mg/m <sup>3</sup> )                      | 384 mg/m <sup>3</sup>   |
| United Kingdom               | WEL TWA (mg/m <sup>3</sup> )                                    | 191 mg/m <sup>3</sup>   |
| United Kingdom               | WEL TWA (ppm)   | 50 ppm  |
| United Kingdom               | WEL STEL (mg/m <sup>3</sup> )                                   | 384 mg/m <sup>3</sup>   |
| United Kingdom               | WEL STEL (ppm)  | 100 ppm   |
| Czech Republic               | Expoziční limity (PEL) (mg/m <sup>3</sup> )                     | 200 mg/m <sup>3</sup>   |
| Denmark                      | Grænseværdie (langvarig) (mg/m <sup>3</sup> )                   | 94 mg/m <sup>3</sup>  |
| Denmark                      | Grænseværdie (langvarig) (ppm)                                  | 25 ppm  |
| Finland                      | HTP-arvo (8h) (mg/m <sup>3</sup> )                              | 81 mg/m <sup>3</sup>  |
| Finland                      | HTP-arvo (8h) (ppm)   | 25 ppm  |
| Finland                      | HTP-arvo (15 min)   | 380 mg/m <sup>3</sup>   |
| Finland                      | HTP-arvo (15 min) (ppm)   | 100 ppm   |
| Hungary                      | AK-érték  | 190 mg/m <sup>3</sup>   |

# 4-(AZIDOSULFONYL)PHENETHYLTRIMETHOXYSIANE, 22-25% in methanol/toluene

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| Toluene (108-88-3) |  |   |
|--------------------|--|---|
| Hungary            | CK-érték   | 380 mg/m <sup>3</sup>   |
| Ireland            | OEL (8 hours ref) (mg/m <sup>3</sup> )             | 192 mg/m <sup>3</sup>   |
| Ireland            | OEL (8 hours ref) (ppm)                            | 50 ppm  |
| Ireland            | OEL (15 min ref) (mg/m <sup>3</sup> )              | 384 mg/m <sup>3</sup>   |
| Ireland            | OEL (15 min ref) (ppm)                             | 100 ppm   |
| Lithuania          | IPRV (mg/m <sup>3</sup> )                          | 192 mg/m <sup>3</sup>   |
| Lithuania          | IPRV (ppm)   | 50 ppm  |
| Lithuania          | TPRV (mg/m <sup>3</sup> )                          | 384 mg/m <sup>3</sup>   |
| Lithuania          | TPRV (ppm)   | 100 ppm   |
| Malta              | OEL TWA (mg/m <sup>3</sup> )                       | 192 mg/m <sup>3</sup>   |
| Malta              | OEL TWA (ppm)                                      | 50 ppm  |
| Malta              | OEL STEL (mg/m <sup>3</sup> )                      | 384 mg/m <sup>3</sup>   |
| Malta              | OEL STEL (ppm)                                     | 100 ppm   |
| Norway             | Grenseverdier (AN) (mg/m <sup>3</sup> )            | 94 mg/m <sup>3</sup>  |
| Norway             | Grenseverdier (AN) (ppm)                           | 25 ppm  |
| Norway             | Grenseverdier (Korttidsverdi) (mg/m <sup>3</sup> ) | 94 mg/m <sup>3</sup>  |
| Norway             | Grenseverdier (Korttidsverdi) (ppm)                | 25 ppm  |
| Poland             | NDS (mg/m <sup>3</sup> )                           | 100 mg/m <sup>3</sup>   |
| Poland             | NDSch (mg/m <sup>3</sup> )                         | 200 mg/m <sup>3</sup>   |
| Romania            | OEL TWA (mg/m <sup>3</sup> )                       | 192 mg/m <sup>3</sup>   |
| Romania            | OEL TWA (ppm)                                      | 50 ppm  |
| Romania            | OEL STEL (mg/m <sup>3</sup> )                      | 384 mg/m <sup>3</sup>   |
| Romania            | OEL STEL (ppm)                                     | 100 ppm   |
| Slovakia           | NPHV (priemerná) (mg/m <sup>3</sup> )              | 192 mg/m <sup>3</sup>   |
| Slovakia           | NPHV (priemerná) (ppm)                             | 50 ppm  |
| Slovakia           | NPHV (Hraničná) (mg/m <sup>3</sup> )               | 384 mg/m <sup>3</sup>   |
| Sweden             | nivågränsvärde (NVG) (mg/m <sup>3</sup> )          | 192 mg/m <sup>3</sup>   |
| Sweden             | nivågränsvärde (NVG) (ppm)                         | 50 ppm  |
| Sweden             | kortidsvärde (KTV) (mg/m <sup>3</sup> )            | 384 mg/m <sup>3</sup>   |
| Sweden             | kortidsvärde (KTV) (ppm)                           | 100 ppm   |
| Canada (Quebec)    | VEMP (mg/m <sup>3</sup> )                          | 188 mg/m <sup>3</sup>   |
| Canada (Quebec)    | VEMP (ppm)   | 50 ppm  |
| Australia          | TWA (mg/m <sup>3</sup> )                           | 191 mg/m <sup>3</sup>   |
| Australia          | TWA (ppm)  | 50 ppm  |
| Australia          | STEL (mg/m <sup>3</sup> )                          | 574 mg/m <sup>3</sup>   |
| Australia          | STEL (ppm)   | 150 ppm   |
| Portugal           | OEL TWA (mg/m <sup>3</sup> )                       | 192 mg/m <sup>3</sup> (indicative limit value)  |
| Portugal           | OEL TWA (ppm)                                      | 50 ppm (indicative limit value)   |
| Portugal           | OEL STEL (mg/m <sup>3</sup> )                      | 384 mg/m <sup>3</sup> (indicative limit value)  |
| Portugal           | OEL STEL (ppm)                                     | 100 ppm (indicative limit value)  |
| Portugal           | OEL chemical category (PT)                         | A4 - Not Classifiable as a Human Carcinogen, skin - potential for cutaneous exposure indicative limit value |

### 8.2. Exposure controls

#### Appropriate engineering controls:

Provide local exhaust or general room 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:



# 4-(AZIDOSULFONYL)PHENETHYLTRIMETHOXYSIANE, 22-25% in methanol/toluene

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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 - amine gas (brown cartridge) respirator.

## SECTION 9: Physical and chemical properties

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

|  |   |
|--|---|
| Physical state                             | : Liquid                                  |
| Appearance                                 | : Liquid.                                 |
| Molecular mass                             | : 331.42 g/mol                            |
| Colour                                     | : Straw to amber.                         |
| Odour                                      | : Mild.                                   |
| Odour threshold                            | : No data available                       |
| Refractive index                           | : 1.55                                    |
| pH   | : No data available                       |
| Relative evaporation rate (butylacetate=1) | : No data available                       |
| Melting point                              | : No data available                       |
| Freezing point                             | : < 0 °C                                  |
| Boiling point                              | : 68 °C (initial, methanol)               |
| Flash point                                | : 29 °C                                   |
| Auto-ignition temperature                  | : No data available                       |
| Decomposition temperature                  | : No data available                       |
| Flammability (solid, gas)                  | : Flammable liquid and vapour.            |
| Vapour pressure                            | : No data available                       |
| Relative vapour density at 20 °C           | : No data available                       |
| Relative density                           | : 0.9                                     |
| % Volatiles                                | : > 70 %                                  |
| 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                       |
| Oxidising properties                       | : No data available                       |
| Explosive limits                           | : 6 - 36.5 vol % (lower; upper: methanol) |

### 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 below 30°C. May slowly build nitrogen pressure.

### 10.3. Possibility of hazardous reactions

May form explosive azides on contact with copper, cadmium, brass, bronze, lead, silver and mercury. Reacts with water and moisture in air, liberating methanol.

### 10.4. Conditions to avoid

Heat. Sparks. Open flame.

# 4-(AZIDOSULFONYL)PHENETHYLTRIMETHOXYSIANE, 22-25% in methanol/toluene

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### 10.5. Incompatible materials

Acids. alcohols. Amines. Moisture. Oxidizing agent. Peroxides. Water.

### 10.6. Hazardous decomposition products

Organic acid vapors.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Toxic if swallowed. Toxic in contact with skin. Toxic if inhaled.

#### 4-(AZIDOSULFONYL)PHENETHYLTRIMETHOXYSIANE, 22-25% in methanol/toluene (68479-60-7)

|                   |                      |
|-------------------|----------------------|
| ATE CLP (oral)    | 250 mg/kg bodyweight |
| ATE CLP (dermal)  | 750 mg/kg bodyweight |
| ATE CLP (vapours) | 6.048 mg/l/4h        |

#### Methanol (67-56-1)

|                           |                                |
|---------------------------|--------------------------------|
| LC50 inhalation rat (ppm) | 22500 ppm (Exposure time: 8 h) |
| ATE CLP (oral)            | 100 mg/kg bodyweight           |
| ATE CLP (dermal)          | 300 mg/kg bodyweight           |
| ATE CLP (vapours)         | 3 mg/l/4h                      |

#### Toluene (108-88-3)

|                            |                        |
|----------------------------|------------------------|
| LD50 oral rat              | 2600 mg/kg             |
| LD50 dermal rabbit         | 12000 mg/kg            |
| LC50 inhalation rat (mg/l) | 12.5 mg/l/4h           |
| ATE CLP (oral)             | 2600 mg/kg bodyweight  |
| ATE CLP (dermal)           | 12000 mg/kg bodyweight |
| ATE CLP (vapours)          | 12.5 mg/l/4h           |
| ATE CLP (dust,mist)        | 12.5 mg/l/4h           |

|                                   |                                  |
|-----------------------------------|----------------------------------|
| Skin corrosion/irritation         | : Causes skin irritation.        |
| Serious eye damage/irritation     | : Causes serious eye irritation. |
| Respiratory or skin sensitisation | : Not classified                 |
| Germ cell mutagenicity            | : Not classified                 |
| Carcinogenicity                   | : Not classified                 |

#### Toluene (108-88-3)

|            |                      |
|------------|----------------------|
| IARC group | 3 - Not classifiable |
|------------|----------------------|

|   |   |
|---|---|
| Reproductive toxicity                               | : Suspected of damaging fertility or the unborn child.  |
| STOT-single exposure                                | : Causes damage to organs. May cause drowsiness or dizziness.   |
| STOT-repeated exposure                              | : May cause damage to organs through prolonged or repeated exposure.  |
| Aspiration hazard                                   | : Not classified  |
| Potential adverse human health effects and symptoms | : This material liberates small amounts of methanol on contact with moisture. Material generates methanol on contact with water or moisture in skin, eyes and mucous membranes and has an irritating, dehydrating effect on overexposed tissue. Vapor inhalation of toluene may lead to impairment of coordination mental alertness, and reaction times, leading to accident proneness. Exposure to levels around 500ppm leads to narcotic effects including nausea, headache and mental confusion.                 |
| Symptoms/effects after inhalation                   | : Toxic if inhaled. Danger of serious damage to health by prolonged exposure through inhalation. May cause drowsiness or dizziness. May cause irritation to the respiratory tract. Overexposure may cause: Nausea. Headache. Visual disturbances. Cough. Impairment of coordination, distorted perception and CNS disturbances have been reported for toluene intoxication. Vapor inhalation of toluene may lead to impairment of coordination mental alertness, and reaction times, leading to accident proneness. |
| Symptoms/effects after skin contact                 | : Toxic in contact with skin. Causes skin irritation. Repeated exposure to this material can result in absorption through skin causing significant health hazard.   |
| Symptoms/effects after eye contact                  | : Causes serious eye damage.  |
| Symptoms/effects after ingestion                    | : Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard. Oral toxicity is associated with methanol, the solvent and a hydrolysis product which causes nausea, vomiting, headache, visual effects including blindness. Onset of symptoms may be delayed up to 48 hours.  |
| Chronic symptoms                                    | : Methanol may effect the central nervous system resulting in persistent or recurring headaches or impaired vision. On contact with water this compound liberates methanol which is known to have a chronic effect on the central nervous system.   |
| Reason for classification                           | : Expert judgment   |

# 4-(AZIDOSULFONYL)PHENETHYLTRIMETHOXYSILANE, 22-25% in methanol/toluene

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### SECTION 12: Ecological information

#### 12.1. Toxicity

|                          |                            |
|--------------------------|----------------------------|
| Ecology - general        | : Harmful to aquatic life. |
| Acute aquatic toxicity   | : Not classified           |
| Chronic aquatic toxicity | : Not classified           |

#### Methanol (67-56-1)

|             |  |
|-------------|--|
| LC50 fish 1 | 28200 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through]) |
| LC50 fish 2 | > 100 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])       |

#### Toluene (108-88-3)

|                |  |
|----------------|--|
| LC50 fish 1    | 15.22 - 19.05 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through]) |
| EC50 Daphnia 1 | 5.46 - 9.83 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])               |
| LC50 fish 2    | 12.6 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])                |
| EC50 Daphnia 2 | 11.5 mg/l (Exposure time: 48 h - Species: Daphnia magna)                               |

#### 12.2. Persistence and degradability

No additional information available

#### 12.3. Bioaccumulative potential

#### Methanol (67-56-1)

|            |       |
|------------|-------|
| BCF fish 1 | < 10  |
| Log Pow    | -0.77 |

#### Toluene (108-88-3)

|         |      |
|---------|------|
| Log Pow | 2.65 |
|---------|------|

#### 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

No additional information available

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

|  |  |
|--|--|
| Sewage disposal recommendations            | : Do not dispose of waste into sewer.  |
| Product/Packaging disposal recommendations | : May be incinerated. Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility. |
| Additional information                     | : Handle empty containers with care because residual vapours are flammable.  |
| Ecology - waste materials                  | : Avoid release to the environment.  |

### SECTION 14: Transport information

#### 14.1. UN number

In accordance with ADR / RID / IMDG / IATA / ADN

#### 14.1. UN number

|               |        |
|---------------|--------|
| UN-No. (ADR)  | : 1993 |
| UN-No. (IMDG) | : 1993 |
| UN-No. (IATA) | : 1993 |
| UN-No. (ADN)  | : 1993 |
| UN-No. (RID)  | : 1993 |

#### 14.2. UN proper shipping name

|                                      |  |
|--------------------------------------|--|
| Proper Shipping Name (ADR)           | : FLAMMABLE LIQUID, N.O.S.   |
| Proper Shipping Name (IMDG)          | : FLAMMABLE LIQUID, N.O.S.   |
| Proper Shipping Name (IATA)          | : Flammable liquid, n.o.s.   |
| Proper Shipping Name (ADN)           | : FLAMMABLE LIQUID, N.O.S.   |
| Proper Shipping Name (RID)           | : FLAMMABLE LIQUID, N.O.S.   |
| Transport document description (ADR) | : UN 1993 FLAMMABLE LIQUID, N.O.S. (4-(AZIDOSULFONYL)PHENETHYLTRIMETHOXYSILANE, 22-25% in methanol/toluene), 3, III, (D/E) |

4-(AZIDOSULFONYL)PHENETHYLTRIMETHOXSILANE, 22-25% in methanol/toluene

Safety Data Sheet

|                                       |  |
|---------------------------------------|--|
| Transport document description (IMDG) | : UN 1993 FLAMMABLE LIQUID, N.O.S. (4-(AZIDOSULFONYL)PHENETHYLTRIMETHOXSILANE, 22-25% in methanol/toluene), 3, III |
| Transport document description (IATA) | : UN 1993 Flammable liquid, n.o.s. (4-(AZIDOSULFONYL)PHENETHYLTRIMETHOXSILANE, 22-25% in methanol/toluene), 3, III |
| Transport document description (ADN)  | : UN 1993 FLAMMABLE LIQUID, N.O.S. (4-(AZIDOSULFONYL)PHENETHYLTRIMETHOXSILANE, 22-25% in methanol/toluene), 3, III |
| Transport document description (RID)  | : UN 1993 FLAMMABLE LIQUID, N.O.S. (4-(AZIDOSULFONYL)PHENETHYLTRIMETHOXSILANE, 22-25% in methanol/toluene), 3, III |

14.3. Transport hazard class(es)

|                                  |     |
|----------------------------------|-----|
| ADR                              |     |
| Transport hazard class(es) (ADR) | : 3 |
| Danger labels (ADR)              | : 3 |



|                                   |     |
|-----------------------------------|-----|
| IMDG                              |     |
| Transport hazard class(es) (IMDG) | : 3 |
| Danger labels (IMDG)              | : 3 |



|                                   |     |
|-----------------------------------|-----|
| IATA                              |     |
| Transport hazard class(es) (IATA) | : 3 |
| Hazard labels (IATA)              | : 3 |



|                                  |     |
|----------------------------------|-----|
| ADN                              |     |
| Transport hazard class(es) (ADN) | : 3 |
| Danger labels (ADN)              | : 3 |



|                                  |     |
|----------------------------------|-----|
| RID                              |     |
| Transport hazard class(es) (RID) | : 3 |
| Danger labels (RID)              | : 3 |



14.4. Packing group

|                     |       |
|---------------------|-------|
| Packing group (ADR) | : III |
|---------------------|-------|

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|                      |       |
|----------------------|-------|
| Packing group (IMDG) | : III |
| Packing group (IATA) | : III |
| Packing group (ADN)  | : III |
| Packing group (RID)  | : III |

### 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)                                 | : F1                      |
| Special provisions (ADR)                                  | : 274, 601, 640E          |
| Limited quantities (ADR)                                  | : 5I                      |
| Excepted quantities (ADR)                                 | : E1                      |
| Packing instructions (ADR)                                | : P001, IBC03, LP01, R001 |
| Mixed packing provisions (ADR)                            | : MP19                    |
| Portable tank and bulk container instructions (ADR)       | : T4                      |
| Portable tank and bulk container special provisions (ADR) | : TP1, TP29               |
| Tank code (ADR)   | : LGBF                    |
| Vehicle for tank carriage                                 | : FL                      |
| Transport category (ADR)                                  | : 3                       |
| Special provisions for carriage - Packages (ADR)          | : V12                     |
| Special provisions for carriage - Operation (ADR)         | : S2                      |
| Hazard identification number (Kemler No.)                 | : 30                      |
| Orange plates   | :                         |



|                               |       |
|-------------------------------|-------|
| Tunnel restriction code (ADR) | : D/E |
|-------------------------------|-------|

#### - Transport by sea

|                                 |                 |
|---------------------------------|-----------------|
| Special provisions (IMDG)       | : 223, 274, 955 |
| Limited quantities (IMDG)       | : 5 L           |
| Excepted quantities (IMDG)      | : E1            |
| Packing instructions (IMDG)     | : P001, LP01    |
| IBC packing instructions (IMDG) | : IBC03         |
| Tank instructions (IMDG)        | : T4            |
| Tank special provisions (IMDG)  | : TP1, TP29     |
| EmS-No. (Fire)                  | : F-E           |
| EmS-No. (Spillage)              | : S-E           |
| Stowage category (IMDG)         | : A             |

#### - Air transport

|  |        |
|--|--------|
| PCA Excepted quantities (IATA)               | : E1   |
| PCA Limited quantities (IATA)                | : Y344 |
| PCA limited quantity max net quantity (IATA) | : 10L  |
| PCA packing instructions (IATA)              | : 355  |
| PCA max net quantity (IATA)                  | : 60L  |
| CAO packing instructions (IATA)              | : 366  |
| CAO max net quantity (IATA)                  | : 220L |
| Special provisions (IATA)                    | : A3   |
| ERG code (IATA)                              | : 3L   |

# 4-(AZIDOSULFONYL)PHENETHYLTRIMETHOXYSilANE, 22-25% in methanol/toluene

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### - Inland waterway transport

|                                   |                  |
|-----------------------------------|------------------|
| Classification code (ADN)         | : F1             |
| Special provisions (ADN)          | : 274, 601, 640E |
| Limited quantities (ADN)          | : 5 L            |
| Excepted quantities (ADN)         | : E1             |
| Carriage permitted (ADN)          | : T              |
| Equipment required (ADN)          | : PP, EX, A      |
| Ventilation (ADN)                 | : VE01           |
| Number of blue cones/lights (ADN) | : 0              |

### - Rail transport

|   |                           |
|---|---------------------------|
| Classification code (RID)                                 | : F1                      |
| Special provisions (RID)                                  | : 274, 601, 640E          |
| Limited quantities (RID)                                  | : 5L                      |
| Excepted quantities (RID)                                 | : E1                      |
| Packing instructions (RID)                                | : P001, IBC03, LP01, R001 |
| Mixed packing provisions (RID)                            | : MP19                    |
| Portable tank and bulk container instructions (RID)       | : T4                      |
| Portable tank and bulk container special provisions (RID) | : TP1, TP29               |
| Tank codes for RID tanks (RID)                            | : LGBF                    |
| Transport category (RID)                                  | : 3                       |
| Special provisions for carriage – Packages (RID)          | : W12                     |
| Colis express (express parcels) (RID)                     | : CE4                     |
| Hazard identification number (RID)                        | : 30                      |

### 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

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance 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.

Substance(s) are not subject to Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC.

Contains no REACH Annex XIV substances

% Volatiles : > 70 %

#### 15.1.2. National regulations

##### Germany

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

##### Netherlands

SZW-lijst van kankerverwekkende stoffen : Toluene,4-(2-Trimethoxysilylethyl)benzenesulfonyl azide are listed

SZW-lijst van mutagene stoffen : 4-(2-Trimethoxysilylethyl)benzenesulfonyl azide is listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : None of the components are listed



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NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : Methanol,Toluene are listed

### Denmark

Class for fire hazard : Class II-1

Store unit : 5 liter

Classification remarks : R10 <H226;H301+H311+H331;H315;H319;H336;H361;H370;H373>; Emergency management guidelines for the storage of flammable liquids must be followed

Danish National Regulations : Young people below the age of 18 years are not allowed to use the product  
Pregnant/breastfeeding women working with the product must not be in direct contact with the product

The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal

### 15.2. Chemical safety assessment

No additional information available

## SECTION 16: Other information

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

Other information : Prepared by safety and environmental affairs.

Full text of H- and EUH-statements:

|                                  |  |
|----------------------------------|--|
| Acute Tox. 3 (Dermal)            | Acute toxicity (dermal), Category 3                                    |
| Acute Tox. 3 (Inhalation:vapour) | Acute toxicity (inhalation:vapour) Category 3                          |
| Acute Tox. 3 (Oral)              | Acute toxicity (oral), Category 3                                      |
| Acute Tox. 4 (Inhalation:vapour) | Acute toxicity (inhalation:vapour) Category 4                          |
| Asp. Tox. 1                      | Aspiration hazard, Category 1  |
| Eye Irrit. 2                     | Serious eye damage/eye irritation, Category 2                          |
| Flam. Liq. 2                     | Flammable liquids, Category 2  |
| Flam. Liq. 3                     | Flammable liquids, Category 3  |
| Repr. 2                          | Reproductive toxicity, Category 2                                      |
| Repr. 2                          | Reproductive toxicity, Category 2                                      |
| Skin Irrit. 2                    | Skin corrosion/irritation, Category 2                                  |
| STOT RE 2                        | Specific target organ toxicity — Repeated exposure, Category 2         |
| STOT SE 1                        | Specific target organ toxicity — single exposure, Category 1           |
| STOT SE 2                        | Specific target organ toxicity — Single exposure, Category 2           |
| STOT SE 3                        | Specific target organ toxicity — Single exposure, Category 3, Narcosis |
| H225                             | Highly flammable liquid and vapour.                                    |
| H226                             | Flammable liquid and vapour.   |
| H301                             | Toxic if swallowed.  |
| H304                             | May be fatal if swallowed and enters airways.                          |
| H311                             | Toxic in contact with skin.  |
| H315                             | Causes skin irritation.  |
| H319                             | Causes serious eye irritation.   |
| H331                             | Toxic if inhaled.  |
| H332                             | Harmful if inhaled.  |
| H336                             | May cause drowsiness or dizziness.                                     |
| H361                             | Suspected of damaging fertility or the unborn child.                   |
| H361d                            | Suspected of damaging the unborn child.                                |
| H370                             | Causes damage to organs.   |
| H371                             | May cause damage to organs.  |
| H373                             | May cause damage to organs through prolonged or repeated exposure.     |

# 4-(AZIDOSULFONYL)PHENETHYLTRIMETHOXYSIANE, 22-25% in methanol/toluene

## Safety Data Sheet

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SDS EU (REACH Annex II) - Custom

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