

# SAFETY DATA SHEET

Based upon Regulation (EC) No 1907/2006, as amended by Regulation (EU) No 2020/878



## SEAL & BOND SIL 25

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

#### 1.1. Product identifier

Product name : SEAL & BOND SIL 25  
Registration number REACH : Not applicable (mixture)  
Product type REACH : Mixture

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

##### 1.2.1 Relevant identified uses

Sealing compound

##### 1.2.2 Uses advised against

No uses advised against known

#### 1.3. Details of the supplier of the safety data sheet

##### Supplier of the safety data sheet

Novatio\*  
Industrielaan 5B  
B-2250 Olen  
☎ +32 14 25 76 40  
☎ +32 14 22 02 66  
info@novatio.be  
\*NOVATIO is a registered trademark of Novatech International N.V.

##### Manufacturer of the product

Novatech International N.V.  
Industrielaan 5B  
B-2250 Olen  
☎ +32 14 85 97 37  
☎ +32 14 85 97 38  
info@novatech.be

#### 1.4. Emergency telephone number

24h/24h (Telephone advice: English, French, German, Dutch) :  
+32 14 58 45 45 (BIG)

### SECTION 2: Hazards identification

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

Not classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

#### 2.2. Label elements

Not classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

##### Supplemental information

EUH208 Contains: 3-aminopropyltriethoxysilane. May produce an allergic reaction.  
EUH210 Safety data sheet available on request.

#### 2.3. Other hazards

No other hazards known

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

| Name<br>REACH Registration No | CAS No<br>EC No | Conc. (C) | Classification according to CLP | Note | Remark | M-factors and<br>ATE |
|-------------------------------|-----------------|-----------|---------------------------------|------|--------|----------------------|
|-------------------------------|-----------------|-----------|---------------------------------|------|--------|----------------------|

# SEAL & BOND SIL 25

|  |                       |           |  |               |                          |  |
|--|-----------------------|-----------|--|---------------|--------------------------|--|
| 3-aminopropyltriethoxysilane<br>01-2119480479-24           | 919-30-2<br>213-048-4 | C<2%      | Skin Sens. 1; H317<br>Acute Tox. 4; H302<br>Skin Corr. 1B; H314<br>Eye Dam. 1; H318  | (1)(6)(10)    | Constituent              |  |
| 3-aminopropyl(methyl)silsesquioxanes,<br>ethoxy-terminated | 128446-60-6           | 0.1%<C<1% | Flam. Liq. 3; H226<br>Skin Irrit. 2; H315<br>Eye Irrit. 2; H319  | (1)(10)       | Constituent              |  |
| ethanol<br>01-2119457610-43                                | 64-17-5<br>200-578-6  | C>1%      | Flam. Liq. 2; H225<br>Eye Irrit. 2; H319<br>Eye Irrit. 2; H319: C≥50%,<br>(ECHA)   | (1)(2)(6)(10) | Decomposition<br>product |  |
| methanol<br>01-2119433307-44                               | 67-56-1<br>200-659-6  | C>1%      | Flam. Liq. 2; H225<br>Acute Tox. 3; H331<br>Acute Tox. 3; H311<br>Acute Tox. 3; H301<br>STOT SE 1; H370<br>STOT SE 1; H370: C≥10%, (CLP<br>Annex VI (ATP 0))<br>STOT SE 2; H371: 3%≤C<10%,<br>(CLP Annex VI (ATP 0)) | (1)(2)(10)    | Decomposition<br>product |  |

(1) For H- and EUH-statements in full: see section 16

(2) Substance with a Community workplace exposure limit

(6) Enumerated in Annex VI of Regulation (EC) No. 1272/2008 but the classification has been adapted after evaluation of available test data

(10) Subject to restrictions of Annex XVII of Regulation (EC) No. 1907/2006

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### General:

Observe (own) safety. If possible, approach victim and check vital functions. In case of injury and/or intoxication, call the European emergency number 112. Treat symptoms starting with most life-threatening injuries and disorders. Keep victim under observation, possibility of delayed symptoms.

#### After inhalation:

Remove victim into fresh air. In case of respiratory problems, consult a doctor/medical service.

#### After skin contact:

If possible, wipe up/dry remove chemical. Then rinse/shower immediately with (lukewarm) water. If irritation persists, consult a doctor/medical service.

#### After eye contact:

Rinse immediately with (lukewarm) water. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation persists, consult a doctor/medical service.

#### After ingestion:

Rinse mouth with water. If you feel unwell, consult a doctor/medical service. Do not wait for symptoms to occur to consult Poison Center.

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

#### 4.2.1 Acute symptoms

##### After inhalation:

No effects known.

##### After skin contact:

No effects known.

##### After eye contact:

No effects known.

##### After ingestion:

No effects known.

#### 4.2.2 Delayed symptoms

No effects known.

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

If applicable and available it will be listed below.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

#### 5.1.1 Suitable extinguishing media:

Small fire: Quick-acting ABC powder extinguisher, Quick-acting BC powder extinguisher, Quick-acting class B foam extinguisher, Quick-acting CO2 extinguisher.  
Major fire: Class B foam (not alcohol-resistant).

#### 5.1.2 Unsuitable extinguishing media:

Small fire: Water (quick-acting extinguisher, reel); risk of puddle expansion.  
Major fire: Water; risk of puddle expansion.

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

Upon combustion: formation of CO, CO2 and small quantities of nitrous vapours. Hydrolyzes on exposure to water (moisture): release of highly flammable gases/vapours (ethanol). Hydrolyzes on exposure to water (moisture): release of toxic/combustible gases/vapours (methanol).

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## 5.3. Advice for firefighters

### 5.3.1 Instructions:

No specific fire-fighting instructions required.

### 5.3.2 Special protective equipment for fire-fighters:

Gloves (EN 374). Protective clothing (EN 14605 or EN 13034). Heat/fire exposure: self-contained breathing apparatus (EN 136 + EN 137).

## SECTION 6: Accidental release measures

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

No naked flames.

#### 6.1.1 Protective equipment for non-emergency personnel

See section 8.2

#### 6.1.2 Protective equipment for emergency responders

Gloves (EN 374). Protective clothing (EN 14605 or EN 13034).

Suitable protective clothing

See section 8.2

### 6.2. Environmental precautions

Contain released product.

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

Solid spill: cover with absorbent material. Solid spill: shovel. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.

### 6.4. Reference to other sections

See section 13.

## SECTION 7: Handling and storage

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

### 7.1. Precautions for safe handling

Keep away from naked flames/heat. Observe strict hygiene. Keep container tightly closed.

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

#### 7.2.1 Safe storage requirements:

Meet the legal requirements. Store in a cool area. Store in a dry area. Keep container in a well-ventilated place.

#### 7.2.2 Keep away from:

Heat sources, (strong) acids, (strong) bases, water/moisture.

#### 7.2.3 Suitable packaging material:

No data available

#### 7.2.4 Non suitable packaging material:

No data available

### 7.3. Specific end use(s)

If applicable and available, exposure scenarios are attached in annex. See information supplied by the manufacturer.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### 8.1.1 Occupational exposure

##### a) Occupational exposure limit values

If limit values are applicable and available these will be listed below.

#### EU

|          |   |                       |
|----------|---|-----------------------|
| Methanol | Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value) | 200 ppm               |
|          | Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value) | 260 mg/m <sup>3</sup> |

#### Belgium

|                   |  |                        |
|-------------------|--|------------------------|
| Alcool éthylique  | Time-weighted average exposure limit 8 h | 1000 ppm               |
|                   | Time-weighted average exposure limit 8 h | 1907 mg/m <sup>3</sup> |
| Alcool méthylique | Time-weighted average exposure limit 8 h | 200 ppm                |
|                   | Time-weighted average exposure limit 8 h | 266 mg/m <sup>3</sup>  |
|                   | Short time value                         | 250 ppm                |
|                   | Short time value                         | 333 mg/m <sup>3</sup>  |

#### The Netherlands

|         |   |         |
|---------|---|---------|
| Ethanol | Time-weighted average exposure limit 8 h (Public occupational exposure limit value) | 136 ppm |
|---------|---|---------|

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|          |   |                        |
|----------|---|------------------------|
| Ethanol  | Time-weighted average exposure limit 8 h (Public occupational exposure limit value) | 260 mg/m <sup>3</sup>  |
|          | Short time value (Public occupational exposure limit value)                         | 992 ppm                |
|          | Short time value (Public occupational exposure limit value)                         | 1900 mg/m <sup>3</sup> |
| Methanol | Time-weighted average exposure limit 8 h (Public occupational exposure limit value) | 100 ppm                |
|          | Time-weighted average exposure limit 8 h (Public occupational exposure limit value) | 133 mg/m <sup>3</sup>  |

## France

|                  |  |                        |
|------------------|--|------------------------|
| Alcool éthylique | Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative) | 1000 ppm               |
|                  | Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative) | 1900 mg/m <sup>3</sup> |
|                  | Short time value (VL: Valeur non réglementaire indicative)                         | 5000 ppm               |
|                  | Short time value (VL: Valeur non réglementaire indicative)                         | 9500 mg/m <sup>3</sup> |
| Méthanol         | Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante) | 200 ppm                |
|                  | Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante) | 260 mg/m <sup>3</sup>  |
|                  | Short time value (VL: Valeur non réglementaire indicative)                         | 1000 ppm               |
|                  | Short time value (VL: Valeur non réglementaire indicative)                         | 1300 mg/m <sup>3</sup> |

## Germany

|          |   |                       |
|----------|---|-----------------------|
| Ethanol  | Time-weighted average exposure limit 8 h (TRGS 900) | 200 ppm               |
|          | Time-weighted average exposure limit 8 h (TRGS 900) | 380 mg/m <sup>3</sup> |
| Methanol | Time-weighted average exposure limit 8 h (TRGS 900) | 100 ppm               |
|          | Time-weighted average exposure limit 8 h (TRGS 900) | 130 mg/m <sup>3</sup> |

## Austria

|          |                               |                        |
|----------|-------------------------------|------------------------|
| Ethanol  | Tagesmittelwert (MAK)         | 1000 ppm               |
|          | Tagesmittelwert (MAK)         | 1900 mg/m <sup>3</sup> |
|          | Kurzzeitwert 60(Mow) 3x (MAK) | 2000 ppm               |
|          | Kurzzeitwert 60(Mow) 3x (MAK) | 3800 mg/m <sup>3</sup> |
| Methanol | Tagesmittelwert (MAK)         | 200 ppm                |
|          | Tagesmittelwert (MAK)         | 260 mg/m <sup>3</sup>  |
|          | Kurzzeitwert 15(Miw) 4x (MAK) | 800 ppm                |
|          | Kurzzeitwert 15(Miw) 4x (MAK) | 1040 mg/m <sup>3</sup> |

## UK

|          |   |                        |
|----------|---|------------------------|
| Ethanol  | Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005)) | 1000 ppm               |
|          | Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005)) | 1920 mg/m <sup>3</sup> |
| Methanol | Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005)) | 200 ppm                |
|          | Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005)) | 266 mg/m <sup>3</sup>  |
|          | Short time value (Workplace exposure limit (EH40/2005))                         | 250 ppm                |
|          | Short time value (Workplace exposure limit (EH40/2005))                         | 333 mg/m <sup>3</sup>  |

## USA (TLV-ACGIH)

|          |  |          |
|----------|--|----------|
| Ethanol  | Short time value (TLV - Adopted Value)                         | 1000 ppm |
| Methanol | Time-weighted average exposure limit 8 h (TLV - Adopted Value) | 200 ppm  |
|          | Short time value (TLV - Adopted Value)                         | 250 ppm  |

## b) National biological limit values

If limit values are applicable and available these will be listed below.

### Germany

|                     |   |         |  |
|---------------------|---|---------|--|
| Methanol (Methanol) | Urin: expositionsende, bzw. schichtende bei langzeitexposition: nach mehreren vorangegangenen schichten | 15 mg/l |  |
|---------------------|---|---------|--|

### USA (BEI-ACGIH)

|                     |                     |         |                         |
|---------------------|---------------------|---------|-------------------------|
| Methanol (Methanol) | Urine: end of shift | 15 mg/L | Background, Nonspecific |
|---------------------|---------------------|---------|-------------------------|

### 8.1.2 Sampling methods

| Product name      | Test  | Number |
|-------------------|-------|--------|
| Amines, Aliphatic | NIOSH | 2010   |

### 8.1.3 Applicable limit values when using the substance or mixture as intended

If limit values are applicable and available these will be listed below.

### 8.1.4 Threshold values

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## DNEL/DMEL - Workers

3-aminopropyltriethoxysilane

| Effect level (DNEL/DMEL) | Type                                  | Value                | Remark |
|--------------------------|---------------------------------------|----------------------|--------|
| DNEL                     | Long-term systemic effects inhalation | 14 mg/m <sup>3</sup> |        |
|                          | Long-term systemic effects dermal     | 2 mg/kg bw/day       |        |

## DNEL/DMEL - General population

3-aminopropyltriethoxysilane

| Effect level (DNEL/DMEL) | Type                                  | Value                 | Remark |
|--------------------------|---------------------------------------|-----------------------|--------|
| DNEL                     | Long-term systemic effects inhalation | 3.5 mg/m <sup>3</sup> |        |
|                          | Long-term systemic effects dermal     | 1 mg/kg bw/day        |        |
|                          | Long-term systemic effects oral       | 1 mg/kg bw/day        |        |

## PNEC

3-aminopropyltriethoxysilane

| Compartment | Value    | Remark |
|-------------|----------|--------|
| STP         | 1.3 mg/l |        |

### 8.1.5 Control banding

If applicable and available it will be listed below.

## 8.2. Exposure controls

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

### 8.2.1 Appropriate engineering controls

Keep away from naked flames/heat. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.

### 8.2.2 Individual protection measures, such as personal protective equipment

Observe strict hygiene. Do not eat, drink or smoke during work.

#### a) Respiratory protection:

Respiratory protection not required in normal conditions.

#### b) Hand protection:

Protective gloves against chemicals (EN 374).

| Materials      | Measured breakthrough time | Thickness | Protection index | Remark |
|----------------|----------------------------|-----------|------------------|--------|
| butyl rubber   | > 480 minutes              | > 0.3 mm  | Class 6          |        |
| nitrile rubber | > 10 minutes               | > 0.4 mm  | Class 1          |        |

#### c) Eye protection:

Safety glasses (EN 166).

#### d) Skin protection:

Protective clothing (EN 14605 or EN 13034).

### 8.2.3 Environmental exposure controls:

See sections 6.2, 6.3 and 13

## SECTION 9: Physical and chemical properties

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

|                           |   |
|---------------------------|---|
| Physical form             | Paste                                       |
| Odour                     | Pleasant odour                              |
| Odour threshold           | No data available in the literature         |
| Colour                    | Colourless                                  |
| Particle size             | Not applicable                              |
| Explosion limits          | No data available in the literature         |
| Flammability              | Not classified as flammable                 |
| Log Kow                   | Not applicable (mixture)                    |
| Dynamic viscosity         | No data available in the literature         |
| Kinematic viscosity       | No data available in the literature         |
| Melting point             | No data available in the literature         |
| Boiling point             | No data available in the literature         |
| Relative vapour density   | No data available in the literature         |
| Vapour pressure           | No data available in the literature         |
| Solubility                | Water ; insoluble                           |
| Relative density          | 1.02 ; 23 °C ; ISO 1183-1                   |
| Absolute density          | 1020 kg/m <sup>3</sup> ; 23 °C ; ISO 1183-1 |
| Decomposition temperature | No data available in the literature         |
| Auto-ignition temperature | > 400 °C ; DIN 51794                        |
| Flash point               | No data available in the literature         |
| pH                        | Not applicable (non-soluble in water)       |

### 9.2. Other information

No data available

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## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Heating increases the fire hazard.

### 10.2. Chemical stability

No data available.

### 10.3. Possibility of hazardous reactions

No data available.

### 10.4. Conditions to avoid

#### Precautionary measures

Keep away from naked flames/heat.

### 10.5. Incompatible materials

(strong) acids, (strong) bases, water/moisture.

### 10.6. Hazardous decomposition products

Upon combustion: formation of CO, CO<sub>2</sub> and small quantities of nitrous vapours. Hydrolyzes on exposure to water (moisture): release of highly flammable gases/vapours (ethanol). Hydrolyzes on exposure to water (moisture): release of toxic/combustible gases/vapours (methanol).

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### 11.1.1 Test results

#### Acute toxicity

##### SEAL & BOND SIL 25

| Route of exposure | Parameter | Method | Value           | Exposure time | Species | Value determination | Remark |
|-------------------|-----------|--------|-----------------|---------------|---------|---------------------|--------|
| Oral              | LD50      |        | > 2000 mg/kg bw |               | Rat     | Similar product     |        |

Judgement is based on the relevant ingredients  
3-aminopropyltriethoxysilane

| Route of exposure    | Parameter | Method           | Value            | Exposure time | Species                | Value determination | Remark |
|----------------------|-----------|------------------|------------------|---------------|------------------------|---------------------|--------|
| Oral                 | LD50      | EPA OTS 798.1175 | 2690 mg/kg bw    |               | Rat (male)             | Experimental value  |        |
| Oral                 | LD50      | EPA OTS 798.1175 | 1490 mg/kg bw    |               | Rat (female)           | Experimental value  |        |
| Dermal               | LD50      | EPA OTS 798.1100 | 4076 mg/kg bw    | 24 h          | Rabbit (male / female) | Experimental value  |        |
| Inhalation (vapours) | LC50      | OECD 403         | > 0.05 mg/l air  | 6 h           | Rat (male)             | Experimental value  |        |
| Inhalation (vapours) | LC50      | OECD 403         | > 0.145 mg/l air | 6 h           | Rat (female)           | Experimental value  |        |

#### Conclusion

Not classified for acute toxicity

#### Corrosion/irritation

##### SEAL & BOND SIL 25

| Route of exposure | Result         | Method | Exposure time | Time point | Species | Value determination | Remark |
|-------------------|----------------|--------|---------------|------------|---------|---------------------|--------|
| Eye               | Not irritating |        |               |            | Rabbit  | Similar product     |        |
| Skin              | Not irritating |        |               |            | Rabbit  | Similar product     |        |

Judgement is based on the relevant ingredients  
3-aminopropyltriethoxysilane

| Route of exposure | Result             | Method                 | Exposure time | Time point       | Species | Value determination | Remark |
|-------------------|--------------------|------------------------|---------------|------------------|---------|---------------------|--------|
| Eye               | Serious eye damage | Equivalent to OECD 405 |               | 24; 48; 72 hours | Rabbit  | Experimental value  |        |
| Skin              | Corrosive          | Equivalent to OECD 404 | 1 h           | 24; 48; 72 hours | Rabbit  | Experimental value  |        |

3-aminopropyl(methyl)silsesquioxanes, ethoxy-terminated

| Route of exposure | Result                 | Method | Exposure time | Time point | Species | Value determination | Remark |
|-------------------|------------------------|--------|---------------|------------|---------|---------------------|--------|
| Eye               | Irritating; category 2 |        |               |            |         | Literature study    |        |
| Skin              | Irritating; category 2 |        |               |            |         | Literature study    |        |

#### Conclusion

Not classified as irritating to the respiratory system  
Not classified as irritating to the skin  
Not classified as irritating to the eyes

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## Respiratory or skin sensitisation

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| Route of exposure | Result          | Method   | Exposure time | Observation time point | Species    | Value determination | Remark |
|-------------------|-----------------|----------|---------------|------------------------|------------|---------------------|--------|
| Skin              | Not sensitizing | OECD 406 |               |                        | Guinea pig | Similar product     |        |

Judgement is based on the relevant ingredients  
3-aminopropyltriethoxysilane

| Route of exposure | Result      | Method   | Exposure time | Observation time point | Species                    | Value determination | Remark |
|-------------------|-------------|----------|---------------|------------------------|----------------------------|---------------------|--------|
| Skin              | Sensitizing | OECD 406 |               |                        | Guinea pig (male / female) | Experimental value  |        |

### Conclusion

Not classified as sensitizing for inhalation  
Not classified as sensitizing for skin

## Specific target organ toxicity

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No (test)data on the mixture available

Judgement is based on the relevant ingredients  
3-aminopropyltriethoxysilane

| Route of exposure    | Parameter | Method                 | Value                       | Organ  | Effect                             | Exposure time                     | Species                | Value determination |
|----------------------|-----------|------------------------|-----------------------------|--------|------------------------------------|-----------------------------------|------------------------|---------------------|
| Oral (stomach tube)  | NOAEL     | OECD 408               | 200 mg/kg bw/day            |        | No effect                          | 91 day(s) - 92 day(s)             | Rat (male / female)    | Experimental value  |
| Oral (stomach tube)  | LOAEL     | OECD 408               | 600 mg/kg bw/day            | Liver  | Enlargement/affection of the liver | 91 day(s) - 92 day(s)             | Rat (male / female)    | Experimental value  |
| Dermal               | NOAEL     | Subacute toxicity test | 84 mg/kg bw/day             |        | No effect                          | 9 days (6h / day)                 | Rabbit (male / female) | Experimental value  |
| Inhalation (aerosol) | LOAEC     | Equivalent to OECD 412 | ≥ 147 mg/m <sup>3</sup> air | Larynx | Laryngeal changes                  | 4 weeks (6h / day, 7 days / week) | Rat (male)             | Experimental value  |

3-aminopropyl(methyl)silsesquioxanes, ethoxy-terminated

| Route of exposure | Parameter | Method | Value         | Organ | Effect                | Exposure time | Species | Value determination |
|-------------------|-----------|--------|---------------|-------|-----------------------|---------------|---------|---------------------|
| Inhalation        |           |        | STOT SE cat.3 |       | Drowsiness, dizziness |               |         | Literature study    |

### Conclusion

Not classified for subchronic toxicity

## Mutagenicity (in vitro)

### SEAL & BOND SIL 25

No (test)data on the mixture available

Judgement is based on the relevant ingredients  
3-aminopropyltriethoxysilane

| Result  | Method   | Test substrate                         | Effect | Value determination | Remark |
|---|----------|--|--------|---------------------|--------|
| Negative with metabolic activation, negative without metabolic activation | OECD 471 | Bacteria (S.typhimurium)               |        | Experimental value  |        |
| Negative with metabolic activation, negative without metabolic activation | OECD 473 | Chinese hamster lung fibroblasts (V79) |        | Experimental value  |        |

## Mutagenicity (in vivo)

### SEAL & BOND SIL 25

No (test)data on the mixture available

Judgement is based on the relevant ingredients  
3-aminopropyltriethoxysilane

| Result                     | Method                 | Exposure time | Test substrate        | Organ | Value determination |
|----------------------------|------------------------|---------------|-----------------------|-------|---------------------|
| Negative (Intraperitoneal) | Equivalent to OECD 474 |               | Mouse (male / female) |       | Experimental value  |

### Conclusion

Not classified for mutagenic or genotoxic toxicity

## Carcinogenicity

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No (test) data on the mixture available

Judgement is based on the relevant ingredients

3-aminopropyltriethoxysilane

| Route of exposure | Parameter | Method                      | Value            | Exposure time              | Species               | Effect                 | Organ | Value determination |
|-------------------|-----------|-----------------------------|------------------|----------------------------|-----------------------|------------------------|-------|---------------------|
| Dermal            | NOAEL     | Carcinogenic toxicity study | 209 mg/kg bw/day | 104 weeks (3 times / week) | Mouse (male / female) | No carcinogenic effect | Skin  | Experimental value  |

## Conclusion

Not classified for carcinogenicity

## Reproductive toxicity

### SEAL & BOND SIL 25

No (test) data on the mixture available

Judgement is based on the relevant ingredients

3-aminopropyltriethoxysilane

|  | Parameter | Method           | Value            | Exposure time              | Species | Effect            | Organ  | Value determination        |
|--|-----------|------------------|------------------|----------------------------|---------|-------------------|--------|----------------------------|
| Developmental toxicity (Oral (stomach tube)) | NOAEL     | EPA OTS 798.4900 | 100 mg/kg bw/day | 15 days (gestation, daily) | Rat     | No effect         |        | Experimental value         |
|  | LOAEL     | EPA OTS 798.4900 | 600 mg/kg bw/day | 15 days (gestation, daily) | Rat     | Fetotoxicity      | Foetus | Experimental value         |
| Maternal toxicity (Oral (stomach tube))      | NOAEL     | EPA OTS 798.4900 | 100 mg/kg bw/day | 15 days (gestation, daily) | Rat     | No effect         |        | Experimental value         |
|  | LOAEL     | EPA OTS 798.4900 | 600 mg/kg bw/day | 15 days (gestation, daily) | Rat     | Maternal toxicity |        |                            |
| Effects on fertility                         |           |                  |                  |                            |         |                   |        | Experimental study planned |

## Conclusion

Not classified for reprotoxic or developmental toxicity

## Toxicity other effects

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## Chronic effects from short and long-term exposure

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Skin rash/inflammation.

## 11.2. Information on other hazards

No evidence of endocrine disrupting properties

## SECTION 12: Ecological information

### 12.1. Toxicity

#### SEAL & BOND SIL 25

|   | Parameter | Method | Value              | Duration | Species                         | Test design   | Fresh/salt water | Value determination                     |
|---|-----------|--------|--------------------|----------|---------------------------------|---------------|------------------|---|
| Acute toxicity fishes                   | LC50      |        | 10 mg/l - 100 mg/l | 96 h     | Pimephales promelas             |               |                  | Calculated value; Similar product       |
| Acute toxicity crustacea                | EC50      |        | > 100 mg/l         | 48 h     | Daphnia magna                   |               |                  | Calculated value; Similar product       |
| Toxicity algae and other aquatic plants | ErC50     |        | > 100 mg/l         | 72 h     | Pseudokirchneriella subcapitata | Static system |                  | Literature study; Nominal concentration |
|   | ErC50     |        | 10 mg/l - 100 mg/l | 24 h     | Navicula pelliculosa            |               |                  | Calculated value; Similar product       |
|   | NOEC      |        | > 1 mg/l           | 24 h     | Navicula pelliculosa            |               |                  | Calculated value; Similar product       |
| Long-term toxicity fish                 | NOEC      |        | > 1 mg/l           |          | Oncorhynchus mykiss             |               | 1 mg/l           | Calculated value; Similar product       |
| Long-term toxicity aquatic crustacea    | NOEC      |        | > 1 mg/l           |          | Daphnia magna                   |               | 1 mg/l           | Calculated value; Similar product       |

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## 3-aminopropyltriethoxysilane

|   | Parameter | Method        | Value       | Duration | Species                 | Test design        | Fresh/salt water | Value determination                  |
|---|-----------|---------------|-------------|----------|-------------------------|--------------------|------------------|--------------------------------------|
| Acute toxicity fishes                   | LC50      | OECD 203      | > 934 mg/l  | 96 h     | Brachydanio rerio       | Semi-static system | Fresh water      | Experimental value; GLP              |
| Acute toxicity crustacea                | EC50      | OECD 202      | 331 mg/l    | 48 h     | Daphnia magna           | Static system      | Fresh water      | Experimental value; Locomotor effect |
| Toxicity algae and other aquatic plants | ErC50     | EU Method C.3 | > 1000 mg/l | 72 h     | Scenedesmus subspicatus | Static system      | Fresh water      | Experimental value; GLP              |

### Conclusion

Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008

## 12.2. Persistence and degradability

### 3-aminopropyltriethoxysilane

#### Biodegradation water

| Method        | Value     | Duration  | Value determination |
|---------------|-----------|-----------|---------------------|
| EU Method C.4 | 67 %; GLP | 28 day(s) | Experimental value  |

#### Phototransformation air (DT50 air)

| Method       | Value   | Conc. OH-radicals      | Value determination |
|--------------|---------|------------------------|---------------------|
| AOPWIN v1.92 | 2.427 h | 1.5E6 /cm <sup>3</sup> | Calculated value    |

#### Half-life water (t1/2 water)

| Method                 | Value          | Primary degradation/mineralisation | Value determination |
|------------------------|----------------|------------------------------------|---------------------|
| Equivalent to OECD 111 | 0.15 h - 8.5 h | Primary degradation                | Experimental value  |

### Conclusion

#### Water

Contains non readily biodegradable component(s)

## 12.3. Bioaccumulative potential

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#### Log Kow

| Method | Remark                   | Value | Temperature | Value determination |
|--------|--------------------------|-------|-------------|---------------------|
|        | Not applicable (mixture) |       |             |                     |

### 3-aminopropyltriethoxysilane

#### BCF fishes

| Parameter | Method   | Value             | Duration  | Species         | Value determination |
|-----------|----------|-------------------|-----------|-----------------|---------------------|
| BCF       | OECD 305 | 3.4; Fresh weight | 8 week(s) | Cyprinus carpio | Experimental value  |

#### Log Kow

| Method | Remark | Value    | Temperature | Value determination |
|--------|--------|----------|-------------|---------------------|
|        |        | -4 - 0.7 | 20 °C       | QSAR                |

### 3-aminopropyl(methyl)silsesquioxanes, ethoxy-terminated

#### Log Kow

| Method | Remark            | Value | Temperature | Value determination |
|--------|-------------------|-------|-------------|---------------------|
|        | No data available |       |             |                     |

### Conclusion

Does not contain bioaccumulative component(s)

## 12.4. Mobility in soil

### 3-aminopropyltriethoxysilane

#### (log) Koc

| Parameter | Method | Value | Value determination |
|-----------|--------|-------|---------------------|
| log Koc   |        | -0.6  | QSAR                |

### Conclusion

Contains component(s) with potential for mobility in the soil

## 12.5. Results of PBT and vPvB assessment

Does not contain component(s) that meet(s) the criteria of PBT and/or vPvB as listed in Annex XIII of Regulation (EC) No 1907/2006.

## 12.6. Endocrine disrupting properties

No evidence of endocrine disrupting properties

## 12.7. Other adverse effects

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#### Greenhouse gases

None of the known components is included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014)

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3-aminopropyltriethoxysilane

Groundwater

Groundwater pollutant

## SECTION 13: Disposal considerations

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

### 13.1. Waste treatment methods

#### 13.1.1 Provisions relating to waste

##### European Union

Can be considered as non hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997. The waste code must be assigned by the user, preferably in consultation with the (environmental) authorities concerned.

#### 13.1.2 Disposal methods

Remove waste in accordance with local and/or national regulations. Do not discharge into drains or the environment. Dispose of at authorized waste collection point.

#### 13.1.3 Packaging/Container

No data available

## SECTION 14: Transport information

### Road (ADR), Rail (RID), Inland waterways (ADN), Sea (IMDG/IMSBC), Air (ICAO-TI/IATA-DGR)

#### 14.1. UN number

|           |             |
|-----------|-------------|
| Transport | Not subject |
|-----------|-------------|

#### 14.2. UN proper shipping name

#### 14.3. Transport hazard class(es)

|                              |  |
|------------------------------|--|
| Hazard identification number |  |
| Class                        |  |
| Classification code          |  |

#### 14.4. Packing group

|               |  |
|---------------|--|
| Packing group |  |
| Labels        |  |

#### 14.5. Environmental hazards

|  |    |
|--|----|
| Environmentally hazardous substance mark | no |
|--|----|

#### 14.6. Special precautions for user

|                    |  |
|--------------------|--|
| Special provisions |  |
| Limited quantities |  |

#### 14.7. Maritime transport in bulk according to IMO instruments

|                          |   |
|--------------------------|---|
| Annex II of MARPOL 73/78 | Not applicable, based on available data |
|--------------------------|---|

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### European legislation:

VOC content Directive 2010/75/EU

| VOC content | Remark |
|-------------|--------|
| > 2 %       |        |

REACH Annex XVII - Restriction

Contains component(s) subject to restrictions of Annex XVII of Regulation (EC) No 1907/2006: restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles.

|   | Designation of the substance, of the group of substances or of the mixture  | Conditions of restriction   |
|---|---|---|
| <ul style="list-style-type: none"> <li>3-aminopropyltriethoxysilane</li> <li>3-aminopropyl(methyl)silsesquioxanes, ethoxy-terminated</li> </ul> | Liquid substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: <ul style="list-style-type: none"> <li>(a) hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F;</li> <li>(b) hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10;</li> <li>(c) hazard class 4.1;</li> <li>(d) hazard class 5.1.</li> </ul> | <ol style="list-style-type: none"> <li>Shall not be used in:                             <ul style="list-style-type: none"> <li>— ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,</li> <li>— tricks and jokes,</li> <li>— games for one or more participants, or any article intended to be used as such, even with ornamental aspects,</li> </ul> </li> <li>Articles not complying with paragraph 1 shall not be placed on the market.</li> <li>Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they:                             <ul style="list-style-type: none"> <li>— can be used as fuel in decorative oil lamps for supply to the general public, and,</li> <li>— present an aspiration hazard and are labelled with H304,</li> </ul> </li> <li>Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN).</li> <li>Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of dangerous substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met:                             <ul style="list-style-type: none"> <li>a) lamp oils, labelled with H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: "Keep lamps filled with this liquid out of the reach of children"; and, by 1 December 2010, "Just a sip of lamp oil — or even sucking the wick"</li> </ul> </li> </ol> |

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|   |   |  |
|---|---|--|
|   |   | <p>of lamps — may lead to life-threatening lung damage”;</p> <p>b) grill lighter fluids, labelled with H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: “Just a sip of grill lighter may lead to life-threatening lung damage”;</p> <p>c) lamp oils and grill lighters, labelled with H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.</p>   |
| · 3-aminopropyl(methyl)silsesquioxanes, ethoxy-terminated | <p>Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to that Regulation or not.</p>  | <p>1. Shall not be used, as substance or as mixtures in aerosol dispensers where these aerosol dispensers are intended for supply to the general public for entertainment and decorative purposes such as the following:</p> <ul style="list-style-type: none"> <li>— metallic glitter intended mainly for decoration,</li> <li>— artificial snow and frost,</li> <li>— “whoopee” cushions,</li> <li>— silly string aerosols,</li> <li>— imitation excrement,</li> <li>— horns for parties,</li> <li>— decorative flakes and foams,</li> <li>— artificial cobwebs,</li> <li>— stink bombs.</li> </ul> <p>2. Without prejudice to the application of other Community provisions on the classification, packaging and labelling of substances, suppliers shall ensure before the placing on the market that the packaging of aerosol dispensers referred to above is marked visibly, legibly and indelibly with:</p> <p>“For professional users only”.</p> <p>3. By way of derogation, paragraphs 1 and 2 shall not apply to the aerosol dispensers referred to Article 8 (1a) of Council Directive 75/ 324/EEC.</p> <p>4. The aerosol dispensers referred to in paragraphs 1 and 2 shall not be placed on the market unless they conform to the requirements indicated.</p> |
| · 3-aminopropyltriethoxysilane                            | <p>Substances falling within one or more of the following points:</p> <p>(a) substances classified as any of the following in Part 3 of Annex VI to Regulation (EC) No 1272/2008:</p> <ul style="list-style-type: none"> <li>— carcinogen category 1A, 1B or 2, or germ cell mutagen category 1A, 1B or 2, but excluding any such substances classified due to effects only following exposure by inhalation</li> <li>— reproductive toxicant category 1A, 1B or 2 but excluding any such substances classified due to effects only following exposure by inhalation</li> <li>— skin sensitiser category 1, 1A or 1B</li> <li>— skin corrosive category 1, 1A, 1B or 1C or skin irritant category 2</li> <li>— serious eye damage category 1 or eye irritant category 2</li> </ul> <p>(b) substances listed in Annex II to Regulation (EC) No 1223/2009 of the European Parliament and of the Council</p> <p>(c) substances listed in Annex IV to Regulation (EC) No 1223/2009 for which a condition is specified in at least one of the columns g, h and i of the table in that Annex (d) substances listed in Appendix 13 to this Annex.</p> <p>The ancillary requirements in paragraphs 7 and 8 of column 2 of this entry apply to all mixtures for use for tattooing purposes, whether or not they contain a substance falling within points (a) to (d) of this column of this entry.</p> | <p>Mixtures for tattooing purposes are subject to the restrictions of Regulation (EU) 2020/2081</p>  |

## National legislation Belgium

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No data available

### methanol

|                 |  |
|-----------------|--|
| Résorption peau | Alcool méthylique; D; La mention “D” signifie que la résorption de l’agent, via la peau, les muqueuses ou les yeux, constitue une partie importante de l’exposition totale. Cette résorption peut se faire tant par contact direct que par présence de l’agent dans l’air. |
|-----------------|--|

## National legislation The Netherlands

### SEAL & BOND SIL 25

|                      |   |
|----------------------|---|
| Waterbezwaarlijkheid | B (4); Algemene Beoordelingsmethodiek (ABM) |
|----------------------|---|

## National legislation France

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No data available

## National legislation Germany

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|     |  |
|-----|--|
| WGK | 1; Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (AwSV) - 18. April 2017 |
|-----|--|

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3-aminopropyltriethoxysilane

|         |         |
|---------|---------|
| TA-Luft | 5.2.5/I |
|---------|---------|

## National legislation Austria

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No data available

## National legislation United Kingdom

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No data available

## Other relevant data

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No data available

## 15.2. Chemical safety assessment

No chemical safety assessment has been conducted.

## SECTION 16: Other information

### Full text of any H- and EUH-statements referred to under section 3:

H225 Highly flammable liquid and vapour.  
H226 Flammable liquid and vapour.  
H301 Toxic if swallowed.  
H302 Harmful if swallowed.  
H311 Toxic in contact with skin.  
H314 Causes severe skin burns and eye damage.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.  
H319 Causes serious eye irritation.  
H331 Toxic if inhaled.  
H370 Causes damage to organs (central nervous system, eyes (blindness)).  
EUH210 Safety data sheet available on request.  
EUH208 Contains a sensitising substance. May produce an allergic reaction.

|              |  |
|--------------|--|
| (*)          | INTERNAL CLASSIFICATION BY BIG   |
| ADI          | Acceptable daily intake  |
| AOEL         | Acceptable operator exposure level   |
| ATE          | Acute Toxicity Estimate  |
| CLP (EU-GHS) | Classification, labelling and packaging (Globally Harmonised System in Europe) |
| DMEL         | Derived Minimal Effect Level   |
| DNEL         | Derived No Effect Level  |
| EC50         | Effect Concentration 50 %  |
| ErC50        | EC50 in terms of reduction of growth rate                                      |
| LC50         | Lethal Concentration 50 %  |
| LD50         | Lethal Dose 50 %   |
| NOAEL        | No Observed Adverse Effect Level   |
| NOEC         | No Observed Effect Concentration   |
| OECD         | Organisation for Economic Co-operation and Development                         |
| PBT          | Persistent, Bioaccumulative & Toxic  |
| PNEC         | Predicted No Effect Concentration  |
| STP          | Sludge Treatment Process   |
| vPvB         | very Persistent & very Bioaccumulative   |

The information in this safety data sheet is based on data and samples provided to BIG. The sheet was written to the best of our ability and according to the state of knowledge at that time. The safety data sheet only constitutes a guideline for the safe handling, use, consumption, storage, transport and disposal of the substances/preparations/mixtures mentioned under point 1. New safety data sheets are written from time to time. Only the most recent versions may be used. Unless indicated otherwise word for word on the safety data sheet, the information does not apply to substances/preparations/mixtures in purer form, mixed with other substances or in processes. The safety data sheet offers no quality specification for the substances/preparations/mixtures in question. Compliance with the instructions in this safety data sheet does not release the user from the obligation to take all measures dictated by common sense, regulations and recommendations or which are necessary and/or useful based on the real applicable circumstances. BIG does not guarantee the accuracy or exhaustiveness of the information provided and cannot be held liable for any changes by third parties. This safety data sheet is only to be used within the European Union, Switzerland, Iceland, Norway and Liechtenstein. Any use outside of this area is at your own risk. Use of this safety data sheet is subject to the licence and liability limiting conditions as stated in your BIG licence agreement or when this is failing the general conditions of BIG. All intellectual property rights to this sheet are the property of BIG and its distribution and reproduction are limited. Consult the mentioned agreement/conditions for details.

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