# **SAFETY DATA SHEET**

COSMO HD-201.121



| GHS product identifier                                     | : COSMO HD-201.121  |
|--|---|
| Product code   | : Not available.  |
| Other means of identification                              | : Not available.  |
| Product type   | : Liquid.   |
| Relevant identified uses o                                 | f the substance or mixture and uses advised against   |
| Product use  | : Adhesive.   |
| Area of application  | : Professional applications.  |
| Supplier's details   | : Weiss USA LLC<br>P.O. Box: 509<br>USA, Monroe, NC 28111-0509<br>Telephone no.: (001) 704 282 4496 |
| e-mail address of person responsible for this SDS          | : Stephen@weiss-usa.com   |
| Emergency telephone<br>number (with hours of<br>operation) | : +1 872 5888271 (WIC)  |
|  |   |

## Section 2. Hazards identification

| OSHA/HCS status                                | <ul> <li>This material is considered hazardous by the OSHA Hazard Communication Standard<br/>(29 CFR 1910.1200).</li> </ul>                        |  |
|--|--|--|
| Classification of the substance or mixture     | : H227FLAMMABLE LIQUIDS - Category 4H319EYE IRRITATION - Category 2AH317SKIN SENSITIZATION - Category 1  |  |
| <u>GHS label elements</u><br>Hazard pictograms |  |  |
| Signal word                                    | : Warning  |  |
| Hazard statements                              | <ul> <li>H227 - Combustible liquid.</li> <li>H317 - May cause an allergic skin reaction.</li> <li>H319 - Causes serious eye irritation.</li> </ul> |  |
|  | -  |  |



United States

## Section 2. Hazards identification

| Prevention                          | <ul> <li>P280 - Wear protective gloves: 4 - 8 hours (breakthrough time): Recommended: Nitrile gloves. Butyl gloves. Neoprene®/ Polychloroprene gloves (≥ 0.5 mm). Protective hand cream Wear protective clothing: Recommended: Long-sleeved protective clothing. Safety shoes Wear eye or face protection.</li> <li>P210 - Keep away from flames and hot surfaces. No smoking.</li> <li>P261 - Avoid breathing vapor.</li> <li>P264 - Wash thoroughly after handling.</li> <li>P272 - Contaminated work clothing must not be allowed out of the workplace.</li> </ul> |
|-------------------------------------|---|
| Response                            | <ul> <li>P363 - Wash contaminated clothing before reuse.</li> <li>P302 + P352 - IF ON SKIN: Wash with plenty of water.</li> <li>P333 + P313 - If skin irritation or rash occurs: Get medical advice or attention.</li> <li>P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes.</li> <li>Remove contact lenses, if present and easy to do. Continue rinsing.</li> <li>P337 + P313 - If eye irritation persists: Get medical advice or attention.</li> </ul>  |
| Storage                             | : P403 + P235 - Store in a well-ventilated place. Keep cool.  |
| Disposal                            | <ul> <li>P501 - Dispose of contents and container in accordance with all local, regional, national<br/>and international regulations.</li> </ul>  |
| Hazards not otherwise<br>classified | : None known.   |

## Section 3. Composition/information on ingredients

| Substance/mixture             | : Mixture        |
|-------------------------------|------------------|
| Other means of identification | : Not available. |
| Identification                |                  |

| Ingredient name                              | Other names | %         | CAS number |
|--|-------------|-----------|------------|
| trimethoxyvinylsilane                        | -           | 3 - 7     | 2768-02-7  |
| 3-(trimethoxysilyl)propylamine               | -           | 1 - 5     | 13822-56-5 |
| N-(3-(trimethoxysilyl)propyl)ethylenediamine | -           | 0.5 - 1.5 | 1760-24-3  |

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.

### Section 4. First aid measures

### Description of necessary first aid measures

| Eye contact | <ul> <li>Immediately flush eyes with plenty of water, occasionally lifting the upper and lower<br/>eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10<br/>minutes. Get medical attention.</li> </ul>  |
|-------------|--|
| Inhalation  | : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If<br>not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial<br>respiration or oxygen by trained personnel. It may be dangerous to the person providing<br>aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects<br>persist or are severe. If unconscious, place in recovery position and get medical<br>attention immediately. Maintain an open airway. Loosen tight clothing such as a collar,<br>tie, belt or waistband. In case of inhalation of decomposition products in a fire,<br>symptoms may be delayed. The exposed person may need to be kept under medical<br>surveillance for 48 hours. |

## Section 4. First aid measures

| Skin contact | : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.   |
|--------------|---|
| Ingestion    | : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. |

| Most important symptoms/effects, acute and delayed                                   |   |  |  |
|--|---|--|--|
| Potential acute health effects   |   |  |  |
| Eye contact  | : Causes serious eye irritation.  |  |  |
| Inhalation   | : No known significant effects or critical hazards.   |  |  |
| Skin contact   | : May cause an allergic skin reaction.  |  |  |
| Ingestion  | : No known significant effects or critical hazards.   |  |  |
| <u>Over-exposure signs/symp</u>  | <u>otoms</u>  |  |  |
| Eye contact  | : Adverse symptoms may include the following:<br>pain or irritation<br>watering<br>redness  |  |  |
| Inhalation   | : No specific data.   |  |  |
| Skin contact   | : Adverse symptoms may include the following:<br>irritation<br>redness  |  |  |
| Ingestion  | : No specific data.   |  |  |
| Indication of immediate medical attention and special treatment needed, if necessary |   |  |  |
| Notes to physician   | : In case of inhalation of decomposition products in a fire, symptoms may be delayed.<br>The exposed person may need to be kept under medical surveillance for 48 hours.  |  |  |
| Specific treatments  | : No specific treatment.  |  |  |
| Protection of first-aiders   | : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. |  |  |

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

| Extinguishing media            |  |
|--------------------------------|--|
| Suitable extinguishing media   | <ul> <li>Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.</li> <li>In case of fire, use water spray (fog), foam, dry chemical or CO<sub>2</sub>.</li> <li>LARGE FIRE: Use alcohol-resistant foam or water spray or fog.</li> </ul> |
| Unsuitable extinguishing media | : Do not use water jet.  |

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## Section 5. Fire-fighting measures

| Specific hazards arising from the chemical     | : Combustible liquid. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.  |
|--|--|
| Hazardous thermal<br>decomposition products    | : Decomposition products may include the following materials:<br>carbon dioxide<br>carbon monoxide<br>nitrogen oxides<br>metal oxide/oxides<br>Toxic gases<br>Methanol   |
| Special protective actions for fire-fighters   | : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. |
| Special protective equipment for fire-fighters | : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.  |
| Remark   | : Not considered to be a product presenting a risk of explosion.   |

### Section 6. Accidental release measures

| Personal precautions, protec   | tiv | e equipment and emergency procedures  |
|--------------------------------|-----|---|
| For non-emergency<br>personnel | :   | No action shall be taken involving any personal risk or without suitable training.<br>Evacuate surrounding areas. Keep unnecessary and unprotected personnel from<br>entering. Do not touch or walk through spilled material. Shut off all ignition sources.<br>No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide<br>adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put<br>on appropriate personal protective equipment. |
| For emergency responders       | :   | If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".   |
| Environmental precautions      | :   | Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains<br>and sewers. Inform the relevant authorities if the product has caused environmental<br>pollution (sewers, waterways, soil or air).   |
| Methods and materials for co   | nta | ainment and cleaning up   |
| Small spill                    | :   | Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.  |
|                                |     |   |

Large spill
 Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### Precautions for safe handling

| Protective measures  | : | Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous. Do not reuse container. |
|--|---|--|
| Advice on general<br>occupational hygiene                          | : | Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.  |
| Conditions for safe storage,<br>including any<br>incompatibilities | : | Store in accordance with local regulations. Store in a segregated and approved area.<br>Store in original container protected from direct sunlight in a dry, cool and well-ventilated<br>area, away from incompatible materials (see Section 10) and food and drink. Eliminate<br>all ignition sources. Separate from oxidizing materials. Keep container tightly closed<br>and sealed until ready for use. Containers that have been opened must be carefully<br>resealed and kept upright to prevent leakage. Do not store in unlabeled containers.<br>Use appropriate containment to avoid environmental contamination. See Section 10 for<br>incompatible materials before handling or use.  |

## Section 8. Exposure controls/personal protection

#### **Control parameters**

**Occupational exposure limits** 

| Ingredient name                              | Exposure limits |
|--|-----------------|
| trimethoxyvinylsilane                        | None.           |
| 3-(trimethoxysilyl)propylamine               | None.           |
| N-(3-(trimethoxysilyl)propyl)ethylenediamine | None.           |

| Appropriate engineering controls | : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.   |
|----------------------------------|---|
| Environmental exposure controls  | : Emissions from ventilation or work process equipment should be checked to ensure<br>they comply with the requirements of environmental protection legislation. In some<br>cases, fume scrubbers, filters or engineering modifications to the process equipment<br>will be necessary to reduce emissions to acceptable levels.   |
| Individual protection meas       | <u>ires</u>   |
| Hygiene measures                 | : Wash hands, forearms and face thoroughly after handling chemical products, before<br>eating, smoking and using the lavatory and at the end of the working period.<br>Appropriate techniques should be used to remove potentially contaminated clothing.<br>Contaminated work clothing should not be allowed out of the workplace. Wash<br>contaminated clothing before reusing. Ensure that eyewash stations and safety<br>showers are close to the workstation location. |

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## Section 8. Exposure controls/personal protection

| -                      |   |
|------------------------|---|
| Eye/face protection    | : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.  |
| Skin protection        |   |
| Hand protection        | : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. 4 - 8 hours (breakthrough time): Recommended: Nitrile gloves. Butyl gloves. Neoprene®/ Polychloroprene gloves (≥ 0.5 mm). Protective hand cream. |
| Body protection        | : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: Long-sleeved protective clothing. Safety shoes.  |
| Other skin protection  | <ul> <li>Appropriate footwear and any additional skin protection measures should be selected<br/>based on the task being performed and the risks involved and should be approved by a<br/>specialist before handling this product.</li> </ul>   |
| Respiratory protection | : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.  |

## Section 9. Physical and chemical properties

#### Appearance

| Appearance                                   |   |   |
|--|---|---|
| Physical state                               | : | Liquid. [Paste.]  |
| Color  | : | White.  |
| Odor   | : | Characteristic.   |
| Odor threshold                               | : | Not available.  |
| рН   | : | Not available.  |
| Melting point                                | : | Not available.  |
| Boiling point                                | : | Not available.  |
| Flash point                                  | : | Closed cup: 61°C (141.8°F)  |
| Evaporation rate                             | : | Not available.  |
| Flammability (solid, gas)                    | : | Not applicable.   |
| Lower and upper explosive (flammable) limits | 1 | Not available.  |
| Vapor pressure                               | : | Not available.  |
| Vapor density                                | : | Not available.  |
| Relative density                             | : | Not available.  |
| Density                                      | : | 1.42 g/cm <sup>3</sup>  |
| Solubility                                   | 1 | Insoluble in the following materials: cold water and hot water.               |
| Partition coefficient: n-<br>octanol/water   | : | Not available.  |
| Auto-ignition temperature                    | : | Not available.  |
| Decomposition temperature                    | : | Not available.  |
| SADT   | : | Not available.  |
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## Section 9. Physical and chemical properties

| Viscosity                                | : Dynamic (room temperature): 28900 mPa·s (28900 cP)  |
|--|---|
| Flow time (ISO 2431)                     | : Not available.  |
| Physical/chemical<br>properties comments | : Not considered to be a product presenting a risk of explosion.<br>Oxidizing properties: None. |

## Section 10. Stability and reactivity

| Reactivity                         | : No specific test data related to reactivity available for this product or its ingredients.  |
|------------------------------------|---|
| Chemical stability                 | : The product is stable.  |
| Possibility of hazardous reactions | : Under normal conditions of storage and use, hazardous reactions will not occur.<br>Under normal conditions of storage and use, hazardous polymerization will not occur.   |
| Conditions to avoid                | : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Protect from moisture. Strong heat.   |
| Incompatible materials             | : Reactive or incompatible with the following materials:<br>oxidizing materials<br>Reactive or incompatible with the following materials: acids, alkalis and moisture.<br>May decompose in contact with water. Decomposition products may include the<br>following materials: Methanol. |
| Hazardous decomposition products   | : Under normal conditions of storage and use, hazardous decomposition products should not be produced.  |

### Section 11. Toxicological information

### Information on toxicological effects

Acute toxicity

| Product/ingredient name                          | Result                | Species | Dose         | Exposure |
|--|-----------------------|---------|--------------|----------|
| trimethoxyvinylsilane                            | LC50 Inhalation Vapor | Rat     | 16.8 mg/l    | 4 hours  |
|  | LD50 Dermal           | Rabbit  | 3200 mg/kg   | -        |
|  | LD50 Oral             | Rat     | 7120 mg/kg   | -        |
| 3-(trimethoxysilyl)propylamine                   | LD50 Dermal           | Rabbit  | >10000 mg/kg | -        |
|  | LD50 Oral             | Rat     | >2000 mg/kg  | -        |
| N-(3-(trimethoxysilyl)propyl)<br>ethylenediamine | LD50 Oral             | Rat     | 2413 mg/kg   | -        |

#### Irritation/Corrosion

| Product/ingredient name                          | Result                 | Species | Score | Exposure           | Observation |
|--|------------------------|---------|-------|--------------------|-------------|
| trimethoxyvinylsilane                            | Skin - Mild irritant   | Rabbit  | -     | 24 hours 500<br>mg | -           |
| 3-(trimethoxysilyl)propylamine                   | Skin - Irritant        | Rabbit  | -     | -                  | -           |
|  | Eyes - Severe irritant | Rabbit  | -     | -                  | -           |
| N-(3-(trimethoxysilyl)propyl)<br>ethylenediamine | Eyes - Severe irritant | Rabbit  | -     | 15 mg              | -           |
|  | Skin - Mild irritant   | Rabbit  | -     | 500 mg             | -           |

### **Sensitization**

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|                                |             |                        |                          |         |    |      |

## Section 11. Toxicological information

| Product/ingredient name  | Route of exposure  | Spec              | ies                                       | Result    |                      |
|--|--|-------------------|---|-----------|----------------------|
| 3-(trimethoxysilyl)propylamine                                 | skin   | Guinea pig Not se |   | Not sensi | tizing               |
| <u>Mutagenicity</u>  |  | •                 |   |           |                      |
| Product/ingredient name  | Test   |                   | Experiment                                |           | Result               |
| 3-(trimethoxysilyl)propylamine                                 | OECD 471 Bacte<br>Reverse Mutation<br>OECD 474 Mam<br>Erythrocyte<br>Micronucleus Te | n Test<br>malian  | Subject: Bacteria<br>Subject: Mammalian-, | Animal    | Negative<br>Negative |
| Conclusion/Summary   | Not available.   |                   |   |           |                      |
| Carcinogenicity<br>Conclusion/Summary<br>Reproductive toxicity | : Not available.   |                   |   |           |                      |
| Conclusion/Summary<br>Teratogenicity                           | : Not available.   |                   |   |           |                      |
|  | : Not available.<br>(single exposure   | <u>e)</u>         |   |           |                      |
| Specific target organ toxicity<br>Not available.               | (repeated expos  | ure)              |   |           |                      |
| Aspiration hazard<br>Not available.                            |  |                   |   |           |                      |
| nformation on the likely<br>outes of exposure                  | : Routes of entry  | anticipa          | ted: Oral, Dermal, Inha                   | lation.   |                      |
| Potential acute health effects                                 |  |                   |   |           |                      |
| Eye contact  | : Causes serious   | eye irrit         | ation.                                    |           |                      |
| Inhalation   | : No known signi   | ficant eff        | ects or critical hazards.                 |           |                      |
| Skin contact   | : May cause an a   | allergic s        | kin reaction.                             |           |                      |
| Ingestion  | : No known signi   | ficant eff        | ects or critical hazards.                 |           |                      |
| Symptoms related to the phys                                   | <u>ical, chemical an</u>   | d toxico          | ological characteristic                   | <u>s</u>  |                      |
|  |  | oms may           | v include the following:                  |           |                      |
| Inhalation   | : No specific data   | а.                |   |           |                      |
| Skin contact   | : Adverse sympto<br>irritation<br>redness  | oms may           | v include the following:                  |           |                      |
|  |  |                   |   |           |                      |

Short term exposure

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

## Section 11. Toxicological information

|                                | •   |  |
|--------------------------------|---|--|
| Potential immediate<br>effects | : Not available.  |  |
| Potential delayed effects      | : Not available.  |  |
| <u>Long term exposure</u>      |   |  |
| Potential immediate effects    | : Not available.  |  |
| Potential delayed effects      | : Not available.  |  |
| Potential chronic health eff   | <u>:ts</u>  |  |
| Not available.                 |   |  |
| General                        | : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels. |  |
| Carcinogenicity                | : No known significant effects or critical hazards.   |  |
| Mutagenicity                   | : No known significant effects or critical hazards.   |  |
| Teratogenicity                 | : No known significant effects or critical hazards.   |  |
| <b>Developmental effects</b>   | : No known significant effects or critical hazards.   |  |
| Fertility effects              | : No known significant effects or critical hazards.   |  |
|                                |   |  |

### Numerical measures of toxicity

### Acute toxicity estimates

| Product/ingredient name                      | Oral (mg/<br>kg) | Dermal<br>(mg/kg) | Inhalation<br>(gases)<br>(ppm) | Inhalation<br>(vapors)<br>(mg/l) | Inhalation<br>(dusts and<br>mists) (mg/<br>I) |
|--|------------------|-------------------|--------------------------------|----------------------------------|---|
| COSMO HD-201.121                             | 63470.2          | 3542.4            | N/A                            | 215.4                            | 101   |
| trimethoxyvinylsilane                        | 7120             | 3200              | N/A                            | 16.8                             | N/A   |
| 3-(trimethoxysilyl)propylamine               | 2500             | N/A               | N/A                            | N/A                              | N/A   |
| N-(3-(trimethoxysilyl)propyl)ethylenediamine | 2413             | N/A               | N/A                            | N/A                              | 1.5   |

## Section 12. Ecological information

### **Toxicity**

| Product/ingredient name        | Result          | Species                            | Exposure |
|--------------------------------|-----------------|------------------------------------|----------|
| trimethoxyvinylsilane          | EC50 >100 mg/l  | Algae - Scenedesmus<br>subspicatus | 72 hours |
|                                | EC50 169 mg/l   | Daphnia - Daphnia magna            | 48 hours |
|                                | LC50 191 mg/l   | Fish - Oncorhynchus mykiss         | 96 hours |
|                                | NOEC >957 mg/l  | Algae - Scenedesmus<br>subspicatus | 72 hours |
|                                | NOEC 28 mg/l    | Daphnia - Daphnia magna            | 21 hours |
| 3-(trimethoxysilyl)propylamine | EC50 >1000 mg/l | Algae - Desmodesmus<br>subspicatus | 72 hours |
|                                | EC50 331 mg/l   | Daphnia - Daphnia magna            | 48 hours |
|                                | LC50 >934 mg/l  | Fish - Brachydanio rerio           | 96 hours |

onclusion/Summary

Not available.

### Persistence and degradability

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## Section 12. Ecological information

| Product/ingredient name                                 | Test  | Result                     |            | Dose |                    | Inoculum |
|---|---|----------------------------|------------|------|--------------------|----------|
| trimethoxyvinylsilane<br>3-(trimethoxysilyl)propylamine | -<br>OECD 301A<br>Ready<br>Biodegradability -<br>DOC Die-Away<br>Test | 51 % - 28 c<br>67 % - 28 c |            | -    |                    | -        |
| Product/ingredient name                                 | Aquatic half-life   |                            | Photolysis |      | Biodegradability   |          |
| trimethoxyvinylsilane<br>3-(trimethoxysilyl)propylamine | -   |                            |            |      | Readily<br>Readily |          |

#### **Bioaccumulative potential**

| Product/ingredient name        | LogPow | BCF | Potential |
|--------------------------------|--------|-----|-----------|
| 3-(trimethoxysilyl)propylamine | 0.2    | -   | low       |

#### **Mobility in soil**

Soil/water partition : Not coefficient (Koc)

: Not available.

Other adverse effects

: No known significant effects or critical hazards.

### Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

### Section 14. Transport information

| DOT Classification  | IMDG  | ΙΑΤΑ   |
|---|---|--|
| NA1993  | Not regulated.  | Not regulated.   |
| Combustible liquid, n.o.s.<br>(trimethoxyvinylsilane, 3-<br>(trimethoxysilyl)propylamine) | -   | -  |
| Combustible liquid.   | -   | -  |
|   | NA1993<br>Combustible liquid, n.o.s.<br>(trimethoxyvinylsilane, 3-<br>(trimethoxysilyl)propylamine) | NA1993 Not regulated.<br>Combustible liquid, n.o.s.<br>(trimethoxyvinylsilane, 3-<br>(trimethoxysilyl)propylamine) |

| COSMO HD-201.121 |                     |         |   |  |  |  |
|------------------|---------------------|---------|---|--|--|--|
| Transport i      | nformation          |         |   |  |  |  |
| 111              | -                   | -       |   |  |  |  |
| No.              | No.                 | No.     |   |  |  |  |
| ation            |                     |         |   |  |  |  |
|                  | III<br>No.<br>ation | No. No. | III     -     -       No.     No.     No.       ation     -     - |  |  |  |

- DOT Classification
   Non-bulk packages (less than or equal to 119 gal) of combustible liquids regulated as hazardous materials.
   <u>Limited quantity</u> Yes.
   <u>Packaging instruction</u> Exceptions: 150. Non-bulk: 203. Bulk: 241.
   <u>Quantity limitation</u> Passenger aircraft/rail: 60 L. Cargo aircraft: 220 L.
- Special precautions for user : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Special provisions 148, IB3, T1, TP1

| Transport in bulk according | 1 | Not available. |
|-----------------------------|---|----------------|
| to IMO instruments          |   |                |

## Section 15. Regulatory information

| _   |   | -   |
|---|---|---|
| U.S. Federal regulations  | : | TSCA 8(a) PAIR: acetaldehyde; tetraethyl silicate                 |
|   |   | TSCA 8(a) CDR Exempt/Partial exemption: Not determined            |
|   |   | United States inventory (TSCA 8b): Not determined.                |
|   |   | Clean Water Act (CWA) 307: toluene                                |
|   |   | Clean Water Act (CWA) 311: acetaldehyde; propylene oxide; toluene |
| Clean Air Act Section 112<br>(b) Hazardous Air<br>Pollutants (HAPs) | : | Listed  |
| Clean Air Act Section 602<br>Class I Substances                     | : | Not listed  |
| Clean Air Act Section 602<br>Class II Substances                    | : | Not listed  |
| DEA List I Chemicals<br>(Precursor Chemicals)                       | : | Not listed  |
| DEA List II Chemicals<br>(Essential Chemicals)                      | : | Not listed  |
|   |   |   |

### SARA 302/304

### **Composition/information on ingredients**

|                               |   |                |              | SARA 30      | 2 TPQ             | SARA 3     | 04 RQ        |
|-------------------------------|---|----------------|--------------|--------------|-------------------|------------|--------------|
| Name                          |   | %              | EHS          | (lbs)        | (gallons)         | (lbs)      | (gallons)    |
| furan<br>propylene oxide      |   | ≤0.1<br>≤0.1   | Yes.<br>Yes. | 500<br>10000 | 64.1<br>1444.3    | 100<br>100 | 12.8<br>14.4 |
| SARA 304 RQ<br>SARA 311/312   | : 1126887.5 lb                              | s / 511606.9   | ) kg [95177  | 7.6 gal / 36 | 0286.6 L]         |            |              |
| Classification                | : FLAMMABLE<br>EYE IRRITATI<br>SKIN SENSITI | ON - Categ     | ory 2A       |              |                   |            |              |
| nte of issue/Date of revision | : 09/10/2020                                | Date of previo | ous issue    | : No pre     | evious validation | Version    | :1 11.       |

## Section 15. Regulatory information

### Composition/information on ingredients

| Name                           | %         | Classification                           |  |
|--------------------------------|-----------|--|--|
| trimethoxyvinylsilane          | 3 - 7     | FLAMMABLE LIQUIDS - Category 2           |  |
|                                |           | ACUTE TOXICITY (inhalation) - Category 4 |  |
| 3-(trimethoxysilyl)propylamine | 1 - 5     | FLAMMABLE LIQUIDS - Category 4           |  |
|                                |           | SKIN IRRITATION - Category 2             |  |
|                                |           | SERIOUS EYE DAMAGE - Category 1          |  |
| N-(3-(trimethoxysilyl)propyl)  | 0.5 - 1.5 | ACUTE TOXICITY (inhalation) - Category 4 |  |
| ethylenediamine                |           | SERIOUS EYE DAMAGE - Category 1          |  |
| ,                              |           | SKIN SENSITIZATION - Category 1B         |  |

### SARA 313

Not applicable.

### **State regulations**

| Massachusetts | : None of the components are listed. |
|---------------|--------------------------------------|
| New York      | : None of the components are listed. |
| New Jersey    | : None of the components are listed. |

Pennsylvania

: None of the components are listed.

### California Prop. 65

▲ WARNING: This product can expose you to chemicals including Diisononyl phthalate, Furan, acetaldehyde, Cobalt metal powder and Propylene oxide, which are known to the State of California to cause cancer, and Methanol and Toluene, which are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

| Ingredient name      | No significant risk level | Maximum acceptable dosage level |
|----------------------|---------------------------|---------------------------------|
| Diisononyl phthalate | Yes.                      | -                               |
| Methanol             | -                         | Yes.                            |
| Furan                | -                         | -                               |
| Toluene              | -                         | Yes.                            |
| acetaldehyde         | Yes.                      | -                               |
| Cobalt metal powder  | -                         | -                               |
| Propylene oxide      | -                         | -                               |

### International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

### Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

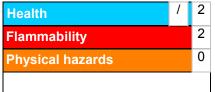
UNECE Aarhus Protocol on POPs and Heavy Metals Not listed.

Date of issue/Date of revision

12/14

## Section 16. Other information

Hazardous Material Information System (U.S.A.)



Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

National Fire Protection Association (U.S.A.)



#### Procedure used to derive the classification

| Proceeding used to derive the classification  |   |  |  |  |
|---|---|--|--|--|
| Classification  |   | Justification  |  |  |
| FLAMMABLE LIQUIDS - Category 4<br>EYE IRRITATION - Category 2A<br>SKIN SENSITIZATION - Category 1 |   | On basis of test data<br>Expert judgment<br>Calculation method |  |  |
| History   |   |  |  |  |
| Date of issue/Date of revision  | : 09/10/2020  |  |  |  |
| Date of previous issue  | : No previous validation  |  |  |  |
| Version   | : 1   |  |  |  |
| Key to abbreviations  | ATE = Acute Toxicity Estimate<br>AMP = Acceptable maximum peak above the acceptable ceiling concentration for an<br>8-hr shift<br>BCF = Bioconcentration Factor<br>GHS = Globally Harmonized System of Classification and Labelling of Chemicals<br>IATA = International Air Transport Association<br>IBC = Internediate Bulk Container<br>IMDG = International Maritime Dangerous Goods<br>LogPow = logarithm of the octanol/water partition coefficient<br>MARPOL = International Convention for the Prevention of Pollution From Ships, 1973<br>as modified by the Protocol of 1978. ("Marpol" = marine pollution)<br>N/A = Not available<br>UN = United Nations |  |  |  |
| References  | : HCS (U.S.A.)- Hazard Communication Standard<br>International transport regulations  |  |  |  |
| Indicates information that has changed from previously issued version.                            |   |  |  |  |

Notice to reader

## Section 16. Other information

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.