



# Safety Data Sheet

## GEM VAR CONV. VARNISH, S.G, WHITE



### 1. Identification

|  |  |                    |  |
|--|--|--------------------|--|
| <b>Product identifier</b>                                      | GEM VAR CONV. VARNISH, S.G, WHITE  |                    |  |
| <b>Product code</b>  | 350-0005   |                    |  |
| <b>Other means of identification</b>                           | GEM VAR CONV. VARNISH, SEMI-GLOSS, WHITE.  |                    |  |
| <b>Recommended use of the chemical and restrictions on use</b> | A protective and/or decorative finish or accompanying paint product. Not recommended for any other use not detailed on product data sheet or label.  |                    |  |
| <b>Manufacturer</b>  | GEMINI INDUSTRIES, INC.<br>2300 Holloway Drive<br>El Reno, OK 73036<br>USA<br><br>Tel. 1-800-262-5710<br>Fax 1-405-262-9310<br><a href="http://www.geminicoatings.com">www.geminicoatings.com</a>    | <b>Distributor</b> | Gemini Industries, Inc.<br>850 Flint Road<br>Toronto, Ontario<br>Canada M3J 2T7<br><br>Tel. 1-800-262-5710 |
| <b>Emergency phone number</b>                                  | 24-hour Emergency (Spill, Leak, Exposure or accident)<br>INFOTRAC 800-535-5053<br>Outside USA, Call Collect 1-352-323-3500 (French & English)<br><br>HAZMAT Response and MSDS Help: EMI 800-510-8510 |                    |  |

### 2. Hazard identification

|                |   |
|----------------|---|
| <b>Summary</b> | Flammable liquid and vapours. Keep away from heat, sparks and open flame. Avoid contact with skin, eyes and clothing. Do not breathe vapours, mists or aerosols. Do not ingest. If ingested consult physician immediately and show this Safety Data Sheet. Wear eye protection, gloves and other protective clothing that are adapted to the task being performed and the risks involved. |
|----------------|---|

#### WHMIS 2015/OSHA HCS 2012/GHS

Flammable liquids (Category 2)  
 Skin corrosion/irritation (Category 2)  
 Serious eye damage/eye irritation (Category 1)  
 Respiratory sensitizer (Category 1)  
 Skin sensitizer (Category 1)  
 Germ cell mutagenicity (Category 1)  
 Carcinogenicity (Category 1)  
 Reproductive toxicity (Category 1)  
 Specific target organ toxicity, single exposure (Category 3)  
 Specific target organ toxicity, repeated exposure (Category 2)



**Other hazards which do not result in classification :**  
 Long-term hazard to the aquatic environment (Category 3).

#### DANGER

H225: Highly flammable liquid and vapour  
 H318: Causes serious eye damage  
 H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled

H350: May cause cancer  
H340: May cause genetic defects  
H360: May damage fertility or the unborn child  
H315: Causes skin irritation  
H317: May cause an allergic skin reaction  
H335: May cause respiratory irritation  
H336: May cause drowsiness or dizziness  
H373: May cause damage to organs through prolonged or repeated exposure  
H412: Harmful to aquatic life with long lasting effects  
P201: Obtain special instructions before use.  
P202: Do not handle until all safety precautions have been read and understood.  
P210: Keep away from heat, sparks, open flames and other ignition sources. No smoking.  
P240: Ground or bond container and receiving equipment.  
P241: Use explosion-proof electrical, ventilating, lighting and all material-handling equipment.  
P242: Use only non-sparking tools.  
P243: Take precautionary measures against static discharge.  
P260: Do not breathe mist, vapours and spray.  
P264: Wash skin thoroughly after handling.  
P271: Use only outdoors or in a well-ventilated area.  
P272: Contaminated work clothing should not be allowed out of the workplace.  
P273: Avoid release to the environment.  
P280: Wear protective gloves, protective clothing and eye protection.  
P284: In case of inadequate ventilation, wear respiratory protection.  
P303+361+353: IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water and soap or take a shower if necessary.  
P333+313: If skin irritation or a rash occurs: Get medical advice/attention.  
P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P342+311: If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.  
P305+351+338: IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.  
P310: Immediately call a doctor/physician.  
P308+313: IF exposed or concerned: Get medical advice/attention.  
P321: Specific treatment (see section 4 of SDS or on this label).  
P362+364: Take off contaminated clothing and wash before reuse.  
P370+378: In case of fire: Use the National Fire Protection Association Class B extinguisher for extinction.  
P403+P235+P233: Store in a well-ventilated place. Keep container tightly closed. Keep cool.  
P405: Store locked up.  
P501: Dispose of contents and container to a licensed chemical disposal agency in accordance with local, regional and national regulations.

### 3. Composition/information on ingredients

| Common name                       | CAS        | Weight % content |
|-----------------------------------|------------|------------------|
| Titanium dioxide                  | 13463-67-7 | 18 - 20 %        |
| n-Butyl Alcohol                   | 71-36-3    | 13 - 15 %        |
| Ethyl Alcohol                     | 64-17-5    | 9.5 - 10.5 %     |
| Butyl acetate (normal)            | 123-86-4   | 9.5 - 10.5 %     |
| Xylene                            | 1330-20-7  | 5.5 - 6.5 %      |
| Propylene glycol monomethyl ether | 107-98-2   | 4.5 - 5.5 %      |
| Cellulose acetate butyrate        | 9004-36-8  | 3.5 - 4.5 %      |
| Ethylene glycol monopropyl ether  | 2807-30-9  | 1.5 - 2.5 %      |
| Ethylbenzene                      | 100-41-4   | 0.5 - 1.5 %      |
| Aluminium hydroxide               | 21645-51-2 | 0.5 - 1.5 %      |
| Amorphous silica                  | 7631-86-9  | 0.5 - 1.5 %      |

|                      |          |             |
|----------------------|----------|-------------|
| Methyl Propyl Ketone | 107-87-9 | 0.5 - 1.5 % |
| Formaldehyde         | 50-00-0  | 0.1 - 0.5 % |

#### 4. First-aid measures

|                               |   |
|-------------------------------|---|
| <b>Inhalation</b>             | Move person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen by trained personnel. If a problem develops or persists, seek medical attention.  |
| <b>Skin contact</b>           | Wash skin with warm water and mild soap for at least 15 minutes. Remove contaminated clothing and wash before reuse. Avoid touching eyes with contaminated body parts. If a problem develops or persists, seek medical attention.   |
| <b>Eye contact</b>            | IMMEDIATELY! Flush with water for at least 15 minutes. Remove contact lenses. Hold eyelids apart to rinse properly. If a problem develops or persists, seek medical attention.  |
| <b>Ingestion</b>              | DO NOT induce vomiting, unless recommended by medical personnel. Never give anything by mouth if victim is unconscious or convulsing. If victim is conscious wash out mouth with water and give 1-2 glasses of water to drink. If spontaneous vomiting occurs, keep head below hip level to prevent aspiration into the lungs. Seek medical attention or contact a Poison Centre immediately.   |
| <b>Other</b>                  | No information available.   |
| <b>Symptoms</b>               | May cause severe eye irritation or eye damage. May cause redness, dryness, rash and skin irritation. May cause irritation to nose, throat and respiratory tract. Inhalation of vapours may cause central nervous system depression such as drowsiness, headache, dizziness, vertigo, nausea and fatigue. May cause an allergic reaction of the skin. May cause an allergic respiratory reaction with symptoms similar to asthma such as wheezing and chest tightness. |
| <b>Notes to the physician</b> | Treat symptomatically. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.   |

#### 5. Fire-fighting measures

|   |   |
|---|---|
| <b>Suitable extinguishing media</b>                 | Class B extinguishers. Dry chemicals, alcohol resistant foam, carbon dioxide (CO <sub>2</sub> ). Do not use direct water jet.   |
| <b>Specific hazards arising from the chemical</b>   | Very flammable liquid and vapours. Vapours are heavier than air and may travel to an ignition source distant from the material handling point. May be ignited by heat, sparks, flame or static electricity. Do not apply to hot surfaces. Contact with strong oxidizers may cause fire. In a fire or if heated, a pressure increase will occur and the container may burst. |
| <b>Special protective equipment</b>                 | Firefighters must wear self contained breathing apparatus with full face mask. Firefighting suit may not be efficient against chemicals.  |
| <b>Special protective actions for fire-fighters</b> | Use water spray to cool fire-exposed containers. Water spray can reduce the intensity of the flames. However, the water jets can spread the fire. If water is used, fog nozzles are preferable.   |

#### 6. Accidental release measures

|  |   |
|--|---|
| <b>Personal precautions, protective equipment and emergency procedures</b> | Do not touch spilled material. Make sure to wear personal protective equipment mentioned in this Safety Data Sheet.                   |
| <b>Environmental precautions</b>   | Prevent entry in sewer and other enclosed area. For a large spill, consult the Department of Environment or the relevant authorities. |
| <b>Methods and</b>   | Remove sources of ignition. Ventilate the area well. Stop leak, if it's possible to do so without risk.                               |

**materials for containment and cleaning up**

Absorb with inert material (soil, sand, vermiculite) and place in an appropriate waste disposal clearly identified. Use non-sparking and antistatic tools. Dispose via a licensed waste disposal contractor. Finish cleaning the contaminated surface by rinsing with soapy water. PS: Rags and others materials soaked with paint or solvent may spontaneously catch fire if improperly store or discarded. Immediately after each use place rags and paper towels in a sealed water-filled metal container to prevent spontaneous combustion.

**7. Handling and storage****Precautions for safe handling**

Keep away from heat, sparks and open flame. Turn off all pilot lights, flames, stoves, heaters, electric motors, welding equipment and other sources of ignition. Use non-sparking and antistatic tools. Ground/bond all containers when transferring large quantities (5 gallons US or 20 L and more). Use only in well ventilated area. Avoid prolonged or repeated breathing of vapour or mists. Avoid contact with skin, eyes and clothing. Wear eye protection, gloves and other protective clothing that are adapted to the task being performed and the risks involved. Keep containers tightly closed when not in use. Containers of this material may be hazardous even when empty. Since empty containers retain product residues (vapour, liquid), all hazard precautions given in this sheet must be observed. Do not eat, do not drink and do not smoke during use. Wash hands, forearms and face thoroughly after handling this compound and before eating, drinking or using toiletries. Remove contaminated clothing and wash before reuse. Rags, steel wool and paper towels soaked with this product may overheat and spontaneously ignite if piled in a heap. After use immediately store them in water-filled metal can with tight fitting lid.

**Conditions for safe storage, including any incompatibilities**

Storage and handling should follow the NFPA 30 Flammable and/or Combustible Liquids Code and the National Fire Code of Canada (NFCC). Store tightly closed and in properly labelled container in a dry, cool and well ventilated place. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Store away from oxidizing materials and incompatible materials (see section 10). Keep away from direct sunlight and heat.

**Storage temperature**

10 to 25°C (50 to 77°F)

**8. Exposure controls/personal protection****Immediately Dangerous to Life or Health**

Titanium dioxide: 5000 mg/m<sup>3</sup>.  
Ethyl alcohol: 3300 ppm.  
n-Butyl Alcohol: 1400 ppm.  
Synthetic Amorphous Fumed Silica: 3000 mg/m<sup>3</sup>.  
Methyl Propyl Ketone: 1500 ppm.  
Xylenes: 900 ppm.  
Ethylbenzene: 800 ppm.  
n-Butyl acetate: 1700 ppm.  
Formaldehyde: 20 ppm.

|                        |          |            |                        |                        |
|------------------------|----------|------------|------------------------|------------------------|
| Titanium dioxide       | TWA (8h) | Total Dust | 10 mg/m <sup>3</sup>   | ACGIH , BC, ON, RSST   |
| n-Butyl Alcohol        | Ceiling  | 30 ppm     |                        | BC                     |
|                        |          | 50 ppm     | 152 mg/m <sup>3</sup>  | RSST (Pc, RP)          |
| Ethyl Alcohol          | TWA (8h) | 15 ppm     |                        | BC                     |
|                        |          | 20 ppm     |                        | ACGIH , ON             |
|                        | STEL     | 1000 ppm   |                        | ACGIH , BC, ON         |
|                        | TWA (8h) | 1000 ppm   | 1880 mg/m <sup>3</sup> | RSST                   |
| Butyl acetate (normal) | STEL     | 200 ppm    |                        | ACGIH , ON             |
|                        |          | 200 ppm    | 950 mg/m <sup>3</sup>  | RSST                   |
|                        | TWA (8h) | 20 ppm     |                        | BC                     |
| Xylene                 | STEL     | 150 ppm    |                        | ACGIH , ON             |
|                        |          | 150 ppm    | 713 mg/m <sup>3</sup>  | RSST                   |
|                        |          | 150 ppm    | 651 mg/m <sup>3</sup>  | ACGIH , BC, ON<br>RSST |

|                                   |                          |         |                        |                   |
|-----------------------------------|--------------------------|---------|------------------------|-------------------|
| Propylene glycol monomethyl ether | TWA (8h)                 | 100 ppm |                        | ACGIH , BC, ON    |
|                                   |                          | 100 ppm | 434 mg/m <sup>3</sup>  | RSST              |
|                                   | STEL                     | 75 ppm  |                        | BC                |
|                                   |                          | 100 ppm |                        | ACGIH             |
| Amorphous silica                  |                          | 150 ppm |                        | ON                |
|                                   |                          | 150 ppm | 553 mg/m <sup>3</sup>  | RSST              |
|                                   | TWA (8h)                 | 50 ppm  |                        | ACGIH , BC        |
|                                   |                          | 100 ppm |                        | ON                |
| Ethylbenzene                      |                          | 100 ppm | 369 mg/m <sup>3</sup>  | RSST              |
|                                   | TWA (8h) Respirable Dust |         | 3 mg/m <sup>3</sup>    | ACGIH , BC        |
|                                   | Respirable Dust          |         | 6 mg/m <sup>3</sup>    | RSST              |
| Aluminium hydroxide               |                          |         | 10 mg/m <sup>3</sup>   | ACGIH , BC, ON    |
|                                   | TWA (8h) Total Dust      |         |                        | RSST              |
| Methyl Propyl Ketone              | STEL                     | 125 ppm | 543 mg/m <sup>3</sup>  | RSST              |
|                                   | TWA (8h)                 | 20 ppm  |                        | ACGIH , BC, ON    |
| Formaldehyde                      |                          | 100 ppm | 434 mg/m <sup>3</sup>  | RSST              |
|                                   | TWA (8h) Respirable Dust |         | 1 mg/m <sup>3</sup>    | ACGIH , BC, ON    |
| Methyl Propyl Ketone              |                          |         | 10 mg/m <sup>3</sup>   | RSST              |
|                                   | TWA (8h) Total Dust      |         |                        | ACGIH , ON        |
| Formaldehyde                      | Ceiling                  | 150 ppm |                        | BC                |
|                                   | STEL                     | 250 ppm |                        | BC                |
| Formaldehyde                      | TWA (8h)                 | 150 ppm |                        | BC                |
|                                   |                          | 150 ppm | 530 mg/m <sup>3</sup>  | RSST              |
|                                   | Ceiling                  | 0.3 ppm | 0.37 mg/m <sup>3</sup> | ACGIH             |
|                                   |                          | 1 ppm   |                        | BC                |
|                                   |                          | 1.5 ppm |                        | ON                |
| Formaldehyde                      |                          | 2 ppm   | 3 mg/m <sup>3</sup>    | RSST (C2, EM, RP) |
|                                   | STEL                     | 1 ppm   |                        | ON                |
|                                   | TWA (8h)                 | 0.3 ppm |                        | BC                |

|   |   |
|---|---|
| <b>Appropriate engineering controls</b> | Provide sufficient mechanical ventilation (general and/or local exhaust) to keep the airborne concentrations of vapours, mists, aerosols or dust below their respective occupational exposure limits. |
|---|---|

### Individual protection measures

|                    |  |
|--------------------|--|
| <b>Eye</b>         | Wear chemical splash goggles.  |
| <b>Hands</b>       | Wear nitrile or neoprene gloves. Disposable nitrile gloves can also be used, but discard after single use. Before using, user should confirm impermeability. Discard gloves with tears, pinholes, or signs of wear. Gloves must only be worn on clean hands. Wash gloves with water before removing them. After using gloves, hands should be washed and dried thoroughly.   |
| <b>Skin</b>        | Personal protective equipment for the body should be selected based on the task being performed and the risks involved. Wear normal work clothing covering arms and legs as required by employer code. If necessary, wear an apron or long-sleeve protective coverall suit.  |
| <b>Respiratory</b> | Respiratory protection is not required for normal use. Respiratory protection equipment (RPE) must be selected, fitted, maintained and inspected in accordance with regulations and CSA Standard Z 94.4 and approved by NIOSH / MSHA. In case of insufficient ventilation or in confined or enclosed space and for an assigned protection factor (APF) up to 10 times the exposure limit, wear a half mask respirator with organic vapour cartridges fitted with P100 filters. For an APF until maximum 100 times of exposure limit, wear a full face respirator mask with organic vapour cartridges and P100 filters. |
| <b>Feet</b>        | Wear rubber boots to clean up a spill.   |

## 9. Physical and chemical properties

|                       |        |                            |           |
|-----------------------|--------|----------------------------|-----------|
| <b>Physical state</b> | Liquid | <b>Flammability</b>        | Flammable |
| <b>Colour</b>         | White  | <b>Flammability limits</b> | N/Av.     |

|   |                             |  |                        |
|---|-----------------------------|--|------------------------|
| <b>Odour</b>  | Solvent                     | <b>Flash point</b>                           | 21°C (69.8°F)          |
| <b>Odour threshold</b>  | N/Av.                       | <b>Auto-ignition temperature</b>             | 287°C (548.6°F)        |
| <b>pH</b>   | N/Ap.                       | <b>Sensibility to electrostatic charges</b>  | Yes                    |
| <b>Melting point</b>  | N/Av.                       | <b>Sensibility to sparks and/or friction</b> | No                     |
| <b>Freezing point</b>   | N/Av.                       | <b>Vapour density</b>                        | >1 (Air = 1)           |
| <b>Boiling point</b>  | >78°C (172.4°F)             | <b>Relative density</b>                      | 1.125 kg/L (Water = 1) |
| <b>Solubility</b>   | Partially soluble in water. | <b>Partition coefficient n-octanol/water</b> | N/Av.                  |
| <b>Evaporation rate</b>   | > Butyl Acetate             | <b>Decomposition temperature</b>             | N/Av.                  |
| <b>Vapour pressure</b>  | N/Av.                       | <b>Viscosity</b>                             | N/Av.                  |
| <b>Percent Volatile</b>   | 51.7%                       | <b>Molecular mass</b>                        | N/Ap.                  |
| N/Av.: Not Available    N/Ap.: Not Applicable    Und.: Undetermined    N/E: Not Established |                             |  |                        |

## 10. Stability and reactivity

|   |   |
|---|---|
| <b>Reactivity</b>   | No information available.   |
| <b>Chemical stability</b>   | Stable under recommended storage conditions.  |
| <b>Possibility of hazardous reactions (including polymerizations)</b> | A dangerous reaction will not occur.  |
| <b>Conditions to avoid</b>  | Avoid heat, flame and sparks. Avoid contact with incompatible materials.  |
| <b>Incompatible materials</b>   | Strong bases, mineral acids, strong oxidizing agents (such as nitric acid, perchloric acid, peroxides, chlorates and perchlorates). |
| <b>Hazardous decomposition products</b>                               | Under normal conditions of storage and use, hazardous decomposition products should not be produced.                                |

## 11. Toxicological information

|                                       |                        |            |               |        |      |
|---------------------------------------|------------------------|------------|---------------|--------|------|
| <b>Numerical measures of toxicity</b> | Titanium dioxide       | Ingestion  | >10000 mg/kg  | Rat    | LD50 |
|                                       |                        | Inhalation | >6.82 mg/l/4h | Rat    | LC50 |
|                                       |                        | Skin       | >10000 mg/kg  | Rabbit | LD50 |
|                                       | n-Butyl Alcohol        | Ingestion  | 790 mg/kg     | Rat    | LD50 |
|                                       |                        | Inhalation | 24.2 mg/l/4h  | Rat    | LC50 |
|                                       |                        | Skin       | 3400 mg/kg    | Rabbit | LD50 |
|                                       | Butyl acetate (normal) | Ingestion  | 10768 mg/kg   | Rat    | LD50 |
|                                       |                        | Inhalation | >32.5 mg/l/4h | Rat    | LC50 |
|                                       |                        | Skin       | >17600 mg/kg  | Rabbit | LD50 |
|                                       | Ethyl Alcohol          | Ingestion  | 7060 mg/kg    | Rat    | LD50 |
|                                       |                        | Inhalation | 39 mg/l/4h    | Mouse  | LC50 |
|                                       |                        | Skin       | 20000 mg/kg   | Rabbit | LD50 |
|                                       | Xylene                 | Ingestion  | 3523 mg/kg    | Rat    | LD50 |
|                                       |                        | Inhalation | 27.6 mg/l/4h  | Rat    | LC50 |
| Skin                                  |                        | 3200 mg/kg | Rabbit        | LD50   |      |

|              |                                   |             |                |            |      |
|--------------|-----------------------------------|-------------|----------------|------------|------|
|              | Propylene glycol monomethyl ether | Ingestion   | 6600 mg/kg     | Rat        | LD50 |
|              |                                   | Inhalation  | 36.4 mg/l/4h   | Rat        | LC50 |
|              |                                   | Skin        | 13000 mg/kg    | Rabbit     | LD50 |
|              | Cellulose acetate butyrate        | Ingestion   | >3200 mg/kg    | Rat        | LD50 |
|              |                                   | Skin        | >1000 mg/kg    | Guinea pig | LD50 |
|              | Ethylene glycol monopropyl ether  | Ingestion   | 3089 mg/kg     | Rat        | LD50 |
|              |                                   | Inhalation  | >11.13 mg/l/4h | Rat        | LC50 |
|              |                                   | Skin        | 883 mg/kg      | Rabbit     | LD50 |
|              | Ethylbenzene                      | Ingestion   | 3500 mg/kg     | Rat        | LD50 |
|              |                                   | Inhalation  | 17.3 mg/l/4h   | Rat        | LC50 |
|              |                                   | Skin        | 15380 mg/kg    | Rabbit     | LD50 |
|              | Aluminium hydroxide               | Ingestion   | >5000 mg/kg    | Rat        | LD50 |
|              |                                   | Skin        | >2000 mg/kg    | Rabbit     | LD50 |
|              | Methyl Propyl Ketone              | Ingestion   | 3730 mg/kg     | Rat        | LD50 |
|              |                                   |             | 1600 mg/kg     | Mouse      | LD50 |
|              |                                   | Inhalation  | 11 mg/l/4h     | Rat        | LC50 |
|              | Amorphous silica                  | Skin        | 6472 mg/kg     | Rabbit     | LD50 |
|              |                                   | Ingestion   | >3300 mg/kg    | Rat        | LD50 |
| Inhalation   |                                   | >2 mg/l/4h  | Rat            | LC50       |      |
| Formaldehyde | Skin                              | >5000 mg/kg | Rabbit         | LD50       |      |
|              | Ingestion                         | 42 mg/kg    | Mouse          | LD50       |      |
|              | Inhalation                        | 414 ppm/4h  | Mouse          | LC50       |      |
|              |                                   | 250 ppm/4h  | Rat            | LC50       |      |
|              | Skin                              | 270 mg/kg   | Rabbit         | LD50       |      |

**Likely routes of exposure**

Skin, eyes, inhalation, ingestion.

**Delayed, immediate and chronic effects**

**Eye contact** May cause severe eye irritation or eye damage. Butyl Alcohol instilled in rabbit eyes resulted in severe corneal irritation and eye damage (OECD 405). Application in excess of 5% dilution solution gave irritating effect. Eye Irritation/Corrosion, Rabbit (OECD TG 405): tests performed with the other ingredients of this mixture gave not irritating to irritating results.

**Skin contact** May cause redness, dryness, rash and skin irritation. Prolonged and repeated contact may cause dry skin, irritation or dermatitis. Skin Irritation/Corrosion, Rabbit (OECD 404) : tests performed with each ingredient of this mixture gave not irritating to irritating results. Widespread contact with skin for several hours can cause harmful amounts of material to be absorbed.

**Inhalation** May cause irritation to nose, throat and respiratory tract. Inhalation of vapours may cause central nervous system depression such as drowsiness, headache, dizziness, vertigo, nausea and fatigue. May cause an allergic respiratory reaction with symptoms similar to asthma such as wheezing and chest tightness. The severity of symptoms may vary depending on exposure conditions. Repeated and prolonged occupational overexposure to solvents may cause brain and nervous system damage.

**Ingestion** Ingestion of large amounts may cause depression of the central nervous system characterized by headache, dizziness, convulsions and loss of consciousness.

**Respiratory or skin sensitization** Aqueous formaldehyde solutions cause skin sensitization. However, free formaldehyde gas does not cause skin sensitization. Formaldehyde can cause asthma attacks due to allergic sensitization of the respiratory tract.

**IARC/NTP Classification**

|                    |             |            |
|--------------------|-------------|------------|
| <b>Common name</b> | <b>IARC</b> | <b>NTP</b> |
| Titanium dioxide   | 2B          | -          |
| Ethylbenzene       | 2B          | -          |
| Amorphous silica   | -           | -          |
| Formaldehyde       | 1           | R          |

IARC : 1- Carcinogenic; 2A- Probably carcinogenic; 2B- Possibly carcinogenic.  
NTP : K- Known to be carcinogens; R- Reasonably anticipated to be carcinogens.

**Carcinogenicity** Contains material which can cause cancer. Titanium dioxide in dust form can cause cancer based on animal data. Although IARC has classified titanium dioxide as possibly carcinogenic to humans (2B), their summary concludes: No significant

|                            |  |
|----------------------------|--|
|                            | <p>exposure to titanium dioxide is thought to occur during the use of products in which titanium dioxide is bound to other materials, such as paint and caulk. There is sufficient evidence for the carcinogenicity of alcoholic beverages in humans (IARC). The occurrence of malignant tumors of the oral cavity, pharynx, larynx, oesophagus, liver, breast and colorectal is causally related to the excessive consumption of alcoholic beverages. However, the possibility of such effects occurring is for chronic consumers of ethyl alcohol. The risk of cancer depends on duration and level of exposure.</p> <p><b>Mutagenicity</b> Ethyl Alcohol has showed positive results in dominant lethal tests by oral and intraperitoneal administration to mice and oral administration to rats (in vivo heritable germ cell mutagenicity tests) (SIDS (2009), IARC (1988)). There are also reports of negative Ames tests from in vitro mutagenicity tests SIDS (2009). Formaldehyde has positive data on somatic cell mutagenicity tests in vivo (SIDS).</p> <p><b>Reproductive toxicity</b> Possible effects on reproduction (ethanol). A significant and prolonged consumption of ethyl alcohol during pregnancy can cause an increased risk of developmental abnormalities fetus humans. Xylene overexposure may affect fetal development in laboratory animals by inhalation during pregnancy.</p> <p><b>Specific target organ toxicity - single exposure</b> Central nervous system, respiratory system.</p> <p><b>Specific target organ toxicity - repeated exposure</b> Hearing organs, central nervous system.</p> |
| <b>Interactive effects</b> | No information available for this product.   |
| <b>Other information</b>   | The oral and skin acute toxicity estimates (ATE) of the mixture were calculated to be greater than 2000 mg/kg. The acute toxicity estimate (ATE) by inhalation of the mixture was calculated to be greater than 20 mg/L/4h. These values are not classified according to WHMIS 2015 and OSHA HCS 2012.   |

## 12. Ecological information

|                            |   |
|----------------------------|---|
| <b>Ecological toxicity</b> | <p>Fish - Pimephales promelas [flow-through] LC50 13400-15100 mg/L; 96 h (ethyl alcohol)</p> <p>Aquatic Invertebrate - Daphnia magna EC50 9268-14221 mg/L; 48 h (ethyl alcohol)</p> <p>Fish - Pimephales promelas - Fresh water LC50 &gt;500 mg/L; 96 h (Titanium dioxide)</p> <p>Aquatic Invertebrates - Daphnia pulex EC50 9.2 mg/L; 48 h (Titanium dioxide)</p> <p>Fish - Pimephales promelas [static] LC50 376 mg/L; 96h (n-Butyl Alcohol) OECD 203</p> <p>Aquatic Invertebrate - Daphnia magna EC50 1983 mg/L; 48 h (n-Butyl alcohol)</p> <p>Algae - Desmodesmus subspicatus EC50 &gt;500 mg/L; 72 h (n-Butyl alcohol)</p> <p>Fish - Pimephales promelas [flow-through] LC50 18 mg/L; 96h (Butyl acetate)</p> <p>Aquatic Plant - Algae, Desmodesmus subspicatus EC50 675 mg/L; 72h (Butyl acetate)</p> <p>Fish - Pimephales promelas [static] LC50 20800 mg/L; 96h (CAS no 107-98-2)</p> <p>Aquatic Invertebrate - Daphnia magna EC50 23300 mg/L; 48h (CAS no 107-98-2)</p> <p>Algae, Selenastrum capricornutum EC50 &gt;1000 mg/L; 96h (CAS no 107-98-2)</p> <p>Fish - Oncorhynchus mykiss - Rainbow trout LC50 13.5-17.3 mg/L; 96 h (Xylene)</p> <p>Aquatic Invertebrate - Daphnia magna EC50 3.82 mg/L; 48 h (Xylene)</p> <p>Fish - Pimephales promelas [flow-through] LC50 1190-1290 mg/L; 96 h (methyl propyl ketone)</p> <p>Aquatic Invertebrate - Daphnia magna EC50 &gt;110 mg/L; 96 h (methyl propyl ketone) OECD 202</p> <p>Fish - Oncorhynchus mykiss - Rainbow trout LC50 4.2 mg/L; 96 h (Ethylbenzene)</p> <p>Aquatic invertebrate - Crangon franciscorum EC50 0.49 mg/L; 48 h (Ethylbenzene)</p> <p>Fish - Pimephales promelas - Fresh water LC50 20800 mg/L; 96 h (Ethylene glycol monopropyl ether)</p> <p>Aquatic Invertebrate - Daphnia magna EC50 23300 mg/L; 48 h (Ethylene glycol monopropyl ether)</p> |
| <b>Persistence</b>         | The product contains components that may persist in the environment.  |

|                                  |  |
|----------------------------------|--|
| <b>Degradability</b>             | The term biodegradability, as such, is not applicable to inorganic compounds like Titanium dioxide. n-Butyl Alcohol is readily biodegradable. Degradation by Biochemical Oxygen Demand BOD (O <sub>2</sub> consumption) was reported as 92% after 20 days. Ethanol is readily biodegradable under aerobic and anaerobic conditions (OECD Test Guideline 301D). n-Butyl acetate is readily biodegradable (96% in 28 days) OECD Guideline 301D. Propylene glycol monomethyl ether is readily biodegradable, 73%-91% during 28 days (OECD TG 301F). Xylene in air is rapidly decomposed by photochemical processes, mainly through oxidation by hydroxyl free radicals as well as some decomposition by direct photolysis. The half-life time in air is estimated to be from 9.5 to 19.7 hours depending to the isomer. Xylene is readily biodegradable at 68% in 10 days and at 88% in 28 days (OECD Guideline 301F) with BOD <sub>5</sub> /COD ratio of 0.97 (IUCLID). Methyl propyl ketone (CAS no 107-87-9) has been shown to readily biodegrade at 70% under aerobic and conditions (OECD TG 301D). Ethylbenzene is biodegraded fairly rapidly by sewage or activated sludge (TOXNET).   |
| <b>Bioaccumulative potential</b> | N-Butyl alcohol has a Bioconcentration Factor (BCF) value of 3, and its Log Kow value is from 0.8 to 1, indicating its potential to bioaccumulate is very low. Ethanol has a Bioconcentration Factor (BCF) value of <10, and its Log Kow value is <0, indicating its potential to bioaccumulate is low. n-Butyl acetate has a low potential for bioaccumulation based on estimated bioconcentration factors (BCF) of 15.3 and low partition coefficient (Log Kow 2.3). Propylene glycol monomethyl ether has a Bioconcentration Factor (BCF) of 2.2 and a partition factor Log Kow of -0.49, indicating no potential for bioconcentration in aquatic organisms (TOXNET). Xylene has Bioconcentration Factor (BCF) of 6 to 23.4 and a partition factor Log Kow of 3.1 to 3.2, depending to the isomer. These values suggest a low potential of bioaccumulation (TOXNET). Methyl propyl ketone (CAS no 107-87-9) is soluble in water and has a low Bioconcentration Factor (BCF) of 3 and a log Kow of 0.93. Methyl propyl ketone is not be expected to accumulate in food chains. Ethylbenzene has a low potential for bioaccumulation (BCF) of 1.1 to 15 were measured in four species of fish. It has low water solubility and a moderate partition coefficient (Log Kow of 3.15).            |
| <b>Mobility in soil</b>          | N-Butyl alcohol is soluble in water. The estimated Koc value of 3.2 suggests that it is expected to have very high mobility in soil. Ethanol is very soluble in water. The resultant Koc of 1 indicates that ethanol released in soil would move quickly through the soil. It will be distributed mainly in the atmosphere (57%) and water (34%). n-Butyl acetate will be distributed to air (93.4%), water (5.78%), soil (0.792%), and sediment (<0.1%). The Koc value of n-butyl acetate can be estimated to be 19, suggesting that it is expected to have very high mobility in soil. Propylene glycol monomethyl ether is very soluble in water. Then, it is expected to have very high mobility in soil. Xylene will rapidly evaporate into the atmosphere because of its low soil absorption and its low solubility in water. Koc values range from 39-365 for the individual isomers. These values suggest that xylenes are expected to have high to moderate mobility in soil (TOXNET). Methyl propyl ketone (CAS no 107-87-9) can be volatilized from moist soil surfaces (SRC). The estimated Koc value of 75 indicates that it is expected to have high mobility in soil. Ethylbenzene is expected to have a moderate mobility in soil with an estimated Koc value of 520 (TOXNET). |
| <b>Other adverse effects</b>     | This chemical does not deplete the ozone layer.  |

### 13. Disposal considerations

|  |   |
|--|---|
| <b>Container</b><br> | Important! Prevent waste generation. Use in full. DO NOT dispose of residue in sewers, streams or drinking water supply. Paint residues, including lacquers, stains, shellac, varnish, solvents and paint thinners, can be reprocessed (recycle) anywhere there is a recovery program. Dispose via a licensed waste disposal contractor. Observe all federal, state/provincial and municipal regulations. If necessary consult the Department of Environment or the relevant authorities. |
|--|---|

### 14. Transport information

|                                     |   |
|-------------------------------------|---|
| <b>UN Number</b>                    | UN 1263   |
| <b>UN Proper Shipping Name</b>      | PAINT   |
| <b>Environmental hazards</b>        | This material does not contain marine pollutant.                              |
| <b>Special precautions for user</b> | Permit required for transportation with proper placards displayed on vehicle. |

## TDG - Transportation of Dangerous Goods (Canada)

Transport hazard class(es)



Class 3

Packing group

II

### IMO/IMDG - International Maritime Transport

Classification

UN 1263. PAINT. Class 3, PG II. Emergency schedules (EmS-No) F-E, S-E

### IATA - International Air Transport Association

Classification

UN 1263. PAINT. Class 3, PG II.

These transportation classifications are provided as a customer service. As the shipper YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. In addition, if a domestic exemption exists, it is the responsibility of the shipper to define the application of it.

## 15. Regulatory information

### CANADA

| Common name                       | CAS        | CEPA | DSL | NDSL | NPRI |
|-----------------------------------|------------|------|-----|------|------|
| Titanium dioxide                  | 13463-67-7 |      | X   |      |      |
| n-Butyl Alcohol                   | 71-36-3    | X    | X   |      | X    |
| Ethyl Alcohol                     | 64-17-5    | X    | X   |      | X    |
| Butyl acetate (normal)            | 123-86-4   | X    | X   |      | X    |
| Xylene                            | 1330-20-7  | X    | X   |      | X    |
| Propylene glycol monomethyl ether | 107-98-2   |      | X   |      |      |
| Cellulose acetate butyrate        | 9004-36-8  |      | X   |      |      |
| Ethylene glycol monopropyl ether  | 2807-30-9  |      | X   |      |      |
| Ethylbenzene                      | 100-41-4   | X    | X   |      | X    |
| Aluminium hydroxide               | 21645-51-2 |      | X   |      |      |
| Amorphous silica                  | 7631-86-9  |      | X   |      |      |
| Methyl Propyl Ketone              | 107-87-9   |      | X   |      |      |
| Formaldehyde                      | 50-00-0    | X    | X   |      | X    |

- CEPA: List of Toxic Substances Managed Under Canadian Environmental Protection Act

- DSL: Domestic Substances List Inventory

- NDSL: Non-Domestic Substances List Inventory

- NPRI: National Pollutant Release Inventory Substances

### UNITED STATE OF AMERICA

| Common name                       | CAS        | TSCA | CERCLA | EPCRA 313 | EPCRA 302/304 | CAA 112(b) HON | CAA 112(b) HAP | CAA 112(r) | CWA 311 | CWA Priority |
|-----------------------------------|------------|------|--------|-----------|---------------|----------------|----------------|------------|---------|--------------|
| Titanium dioxide                  | 13463-67-7 | X    |        |           |               |                |                |            |         |              |
| n-Butyl Alcohol                   | 71-36-3    | X    | X      | X         |               |                |                |            | X       |              |
| Ethyl Alcohol                     | 64-17-5    | X    |        |           |               |                |                |            |         |              |
| Butyl acetate (normal)            | 123-86-4   | X    | X      |           |               |                |                |            | X       |              |
| Xylene                            | 1330-20-7  | X    | X      | X         |               | X              | X              |            | X       |              |
| Propylene glycol monomethyl ether | 107-98-2   | X    |        |           |               | X              |                |            |         |              |
| Cellulose acetate butyrate        | 9004-36-8  | X    |        |           |               |                |                |            |         |              |
| Ethylene glycol monopropyl ether  | 2807-30-9  | X    |        |           |               | X              |                |            |         |              |

|                      |            |   |   |   |   |   |   |   |   |   |
|----------------------|------------|---|---|---|---|---|---|---|---|---|
| Ethylbenzene         | 100-41-4   | X | X | X |   | X | X |   | X | X |
| Aluminium hydroxide  | 21645-51-2 | X |   |   |   |   |   |   |   |   |
| Amorphous silica     | 7631-86-9  | X |   |   |   |   |   |   |   |   |
| Methyl Propyl Ketone | 107-87-9   | X |   |   |   |   |   |   |   |   |
| Formaldehyde         | 50-00-0    | X | X | X | X | X | X | X | X |   |

- TSCA: Toxic Substance Control Act
- CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act list of hazardous substances
- EPCRA 313: Emergency Planning and Community Right-to-Know Act, Section 313 Toxic Chemicals
- EPCRA 302/304: Emergency Planning and Community Right-to-Know Act, Section 302/304 Extremely Hazardous Substances
- CAA 112(b) HON: Clean Air Act - Hazardous Organic National Emission Standard for Hazardous Air Pollutant
- CAA 112(b) HAP: Clean Air Act - Hazardous Air Pollutants lists pollutants
- CAA 112(r): Clean Air Act - Regulated Chemicals for Accidental Release Prevention
- CWA 311: Clean Water Act - List of Hazardous Substances
- CWA Priority: Clean Water Act - Priority Pollutant list

### California Proposition 65

| Common name      | CAS        | Cancer | Reproductive and Developmental Toxicity |
|------------------|------------|--------|---|
| Titanium dioxide | 13463-67-7 | X      |   |
| Ethyl Alcohol    | 64-17-5    | X      | X                                       |
| Ethylbenzene     | 100-41-4   | X      |   |
| Formaldehyde     | 50-00-0    | X      |   |

### Other regulations

#### WHMIS 1988



B2 D2A D2B

Class B2 : Flammable Liquid

Class D2A : Very toxic material causing other toxic effects

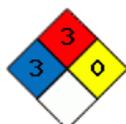
Class D2B : Toxic material causing other toxic effects

#### HMIS



Protective Equipment

#### NFPA



## 16. Other information

|                          |   |
|--------------------------|---|
| <b>Date (YYYY-MM-DD)</b> | GEMINI INDUSTRIES, INC. 2016-04-04  |
| <b>Version</b>           | 01  |
| <b>Other information</b> | <p>- This SDS and the GHS hazards classification is a French translation of the original English version (SDS) from the manufacturer.</p> <p>REFERENCES:</p> <ul style="list-style-type: none"> <li>- Haz-Map, Information on Hazardous Chemicals and Occupational Diseases, <a href="http://hazmap.nlm.nih.gov/index.php">http://hazmap.nlm.nih.gov/index.php</a></li> <li>- TOXNET Databases, Toxicology Data Network, NIH U.S. National Library of Medicine, <a href="http://toxnet.nlm.nih.gov/">http://toxnet.nlm.nih.gov/</a></li> <li>- Service du répertoire toxicologique de la Commission des normes, de l'équité, de la santé et de la sécurité du travail (CNESST), <a href="http://www.reptox.csst.qc.ca">http://www.reptox.csst.qc.ca</a></li> <li>- NIOSH Pocket Guide to Chemical Hazards, Centers for Disease Control and Prevention, NIOSH</li> </ul> |

Publications, 2007, <http://www.cdc.gov/niosh/npg/npg.html>

- IPCS INCHEM, Chemical Safety Information from Intergovernmental Organizations, Canadian Centre for Occupational Health and Safety (CCOHS), Copyright International Programme on Chemical Safety (IPCS), <http://www.inchem.org>

- OECD Existing Chemicals Database, Chemicals Screening Information DataSet (SIDS) for High Volume Chemicals, UNEP publications, <http://webnet.oecd.org/HPV/UI/Search.aspx>

ACGIH: American Conference of Governmental Industrial Hygienists

AIHA: American Industrial Hygiene Association

HMIS: Hazardous Materials Identification System

NFPA: National Fire Protection Association

OSHA: Occupational Safety and Health Administration (USA)

NIOSH: National Institute for Occupational Safety and Health

NTP: National Toxicology Program

RSST: Règlement sur la santé et la sécurité du travail (Québec)

GHS: Globally Harmonized System

IARC: International Agency for Research on Cancer

IDLH: Immediately Dangerous to Life or Health

STEL: Short Term Exposure Limit (15 min)

TWA: Time Weighted Averages

WHMIS: Workplace Hazardous Materials Information System

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