



# Safety Data Sheet

## W/B CLEAR FLAT EXTERIOR TOPCOAT





### 1. Identification

|  |   |                    |   |
|--|---|--------------------|---|
| <b>Product identifier</b>                                      | W/B CLEAR FLAT EXTERIOR TOPCOAT   |                    |   |
| <b>Product code</b>  | WBE-0010  |                    |   |
| <b>Other means of identification</b>                           | None.   |                    |   |
| <b>Recommended use of the chemical and restrictions on use</b> | A protective and/or decorative finish or accompanying paint product.  |                    |   |
| <b>Manufacturer</b>  | GEMINI INDUSTRIES, INC.<br>2300 Holloway Drive<br>El Reno, OK 73036<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> | <b>Gemini Industries, Inc.</b><br>850 Flint Road<br>Toronto, Ontario<br>Canada M3J 2T7<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>PPG Architectural Coatings Canada Inc. 1-450-442-7999, 8h00-17h00<br>HAZMAT Response and MSDS Help: EMI 800-510-8510 |                    |   |

### 2. Hazard identification

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|----------------|---|
| <b>Summary</b> | 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. |
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#### WHMIS 2015/OSHA HCS 2012/GHS

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|   | Skin irritation (Category 2)<br>Eye irritation (Category 2B)<br>Skin sensitizer (Category 1)<br>Reproductive toxicity (Category 1B) |
| <b>Other hazards which do not result in classification :</b><br>Acute hazard to the aquatic environment (Category 1).  |   |

#### DANGER

- H360: May damage fertility or the unborn child
- H315: Causes skin irritation
- H320: Causes eye irritation
- H317: May cause an allergic skin reaction
- H400: Very toxic to aquatic life
- P201: Obtain special instructions before use.
- P202: Do not handle until all safety precautions have been read and understood.
- P261: Avoid breathing mist, vapours and spray.
- P264: Wash skin thoroughly after handling.
- 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.  
P302+352: IF ON SKIN: Wash with soap and water.  
P333+313: If skin irritation or a rash occurs: Get medical advice/attention.  
P305+351+338: IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.  
P337+313: If eye irritation persists: Get medical advice or attention.  
P308+313: IF exposed or concerned: Get medical advice/attention.  
P321: Specific treatment (see on this label).  
P362+364: Take off contaminated clothing and wash before reuse.  
P391: Collect spillage.  
P405: Store locked up.  
P501: Dispose of contents and container to an approved waste disposal plant.

### 3. Composition/information on ingredients

| Common name                       | CAS      | Weight % content |
|-----------------------------------|----------|------------------|
| 2-Butoxyethanol                   | 111-76-2 | 6 - 7 %          |
| Dibutyl phthalate                 | 84-74-2  | 1 - 2 %          |
| Diethylene glycol monobutyl ether | 112-34-5 | 1 - 3 %          |

### 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. Remove contaminated clothing and wash before reuse. 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 small amounts 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 irritation to skin, eyes and respiratory tract. May cause an allergic reaction of the skin. Inhalation of vapours may cause central nervous system depression such as drowsiness, headache, dizziness, vertigo, nausea and fatigue.  |
| <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. Seek medical attention or contact a Poison Centre if large quantities are ingested or inhaled. |

### 5. Fire-fighting measures

|   |  |
|---|--|
| <b>Suitable extinguishing media</b>               | Dry chemicals, alcohol resistant foam, carbon dioxide (CO <sub>2</sub> ). If water is used, fog nozzles are preferable.  |
| <b>Specific hazards arising from the chemical</b> | This product is an aqueous solution which does not support combustion unless the water has been evaporated. Do not apply to hot surfaces. In a fire or if heated, a pressure increase will occur and the container may burst. Emits toxic fumes under fire conditions. |
| <b>Special protective equipment</b>               | Firefighters must wear self contained breathing apparatus with full face mask. Firefighting suit may not be efficient against chemicals.   |

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| <b>Special protective actions for fire-fighters</b> | Use water spray to cool fire-exposed containers. Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply. |
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## 6. Accidental release measures

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| <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 materials for containment and cleaning up</b>               | Ventilate the area well. Stop leak, if it's possible to do so without risk. Remove containers from the area of the spill, if possible without risk. Absorb with inert material (soil, sand, vermiculite) or wipe up or scrape up and place in an appropriate waste disposal container clearly identified. Dispose via a licensed waste disposal contractor. Finish cleaning the contaminated surface by rinsing with soapy water. |

## 7. Handling and storage

|   |   |
|---|---|
| <b>Precautions for safe handling</b>                                | 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. Avoid high temperatures and intense heat. Keep containers tightly closed when not used. 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. |
| <b>Conditions for safe storage, including any incompatibilities</b> | 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. Keep away from direct sunlight and heat. Store away from oxidizing materials and incompatible materials (see section 10). Keep from freezing.  |
| <b>Storage temperature</b>  | 10 to 35°C (50 to 95°F)   |

## 8. Exposure controls/personal protection

|  |  |                    |                      |                  |
|--|--|--------------------|----------------------|------------------|
| <b>Immediately Dangerous to Life or Health</b> | 2-Butoxyethanol: 700 ppm.<br>Dibutyl phthalate: 4000 mg/m <sup>3</sup> .   |                    |                      |                  |
| 2-Butoxyethanol                                | TWA (8h)   | 20 ppm             |                      | ACGIH , BC, ON   |
|  |  | 20 ppm             | 97 mg/m <sup>3</sup> | RSST             |
| Diethylene glycol monobutyl ether              | TWA (8h)   | Inhalable Fraction | 10 ppm               | ACGIH            |
| Dibutyl phthalate                              | TWA (8h)   |                    | 5 mg/m <sup>3</sup>  | ACGIH , ON, RSST |
| <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. Ensure that eyewash stations and safety showers are close to the workstation.  |                    |                      |                  |
| <b>Individual protection measures</b>          |  |                    |                      |                  |
| <b>Eye</b>                                     | Wear chemical splash goggles.  |                    |                      |                  |
| <b>Hands</b>                                   | Wear nitrile or neoprene gloves. 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. Disposable nitrile gloves can also be used, but discard after single use. |                    |                      |                  |

|                    |   |
|--------------------|---|
| <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. 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 of exposure limit, wear a half mask respirator with organic vapour cartridges. For an APF until maximum 100 times of exposure limit, wear a full face mask respirator with organic vapour cartridges. |
| <b>Feet</b>        | Wear rubber boots to clean up a spill.  |

## 9. Physical and chemical properties

|   |                    |  |   |
|---|--------------------|--|---|
| <b>Physical state</b>   | Liquid             | <b>Flammability</b>                          | Non-flammable.                            |
| <b>Colour</b>   | Clear              | <b>Flammability limits</b>                   | N/Av.                                     |
| <b>Odour</b>  | N/Av.              | <b>Flash point</b>                           | >93.3°C (199.9°F)<br>Tagliabue closed cup |
| <b>Odour threshold</b>  | N/Av.              | <b>Auto-ignition temperature</b>             | N/Av.                                     |
| <b>pH</b>   | 8.0 to 9.0         | <b>Sensibility to electrostatic charges</b>  | N/Av.                                     |
| <b>Melting point</b>  | N/Av.              | <b>Sensibility to sparks and/or friction</b> | N/Av.                                     |
| <b>Freezing point</b>   | N/Av.              | <b>Vapour density</b>                        | 5.1 (Air = 1)                             |
| <b>Boiling point</b>  | 89.44°C (193°F)    | <b>Relative density</b>                      | 1.075 kg/L (Water = 1)                    |
| <b>Solubility</b>   | Soluble in water.  | <b>Partition coefficient n-octanol/water</b> | N/Av.                                     |
| <b>Evaporation rate</b>   | N/Av.              | <b>Decomposition temperature</b>             | N/Av.                                     |
| <b>Vapour pressure</b>  | 0.266kPa (2 mm Hg) | <b>Viscosity</b>                             | N/Av.                                     |
| <b>Percent Volatile</b>   | N/Av.              | <b>Molecular mass</b>                        | N/Av.                                     |
| N/Av.: Not Available    N/Av.: Not Applicable    Und.: Undetermined    N/E: Not Established |                    |  |   |

## 10. Stability and reactivity

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|---|--|
| <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 contact with incompatible materials. Avoid high temperatures and intense heat.                 |
| <b>Incompatible materials</b>   | Strong oxidants, strong bases, strong acids.   |
| <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>                     | <table> <tr> <td>2-Butoxyethanol</td> <td>Ingestion 560 mg/kg</td> <td>Rat</td> <td>LD50</td> </tr> <tr> <td></td> <td>Inhalation 2.21 mg/l/4h</td> <td>Rat</td> <td>LC50</td> </tr> <tr> <td></td> <td>Skin 220 mg/kg</td> <td>Rabbit</td> <td>LD50</td> </tr> <tr> <td>Diethylene glycol monobutyl ether</td> <td>Ingestion 5660 mg/kg</td> <td>Rat</td> <td>LD50</td> </tr> <tr> <td></td> <td>Skin 2700 mg/kg</td> <td>Rabbit</td> <td>LD50</td> </tr> <tr> <td>Dibutyl phthalate</td> <td>Ingestion 3474 mg/kg</td> <td>Mouse</td> <td>LD50</td> </tr> <tr> <td></td> <td>Inhalation &gt;15.68 mg/l/4h</td> <td>Rat</td> <td>LC50</td> </tr> <tr> <td></td> <td>Skin &gt;25000 mg/kg</td> <td>Rabbit</td> <td>LD50</td> </tr> </table>  | 2-Butoxyethanol    | Ingestion 560 mg/kg   | Rat                 | LD50   |                   | Inhalation 2.21 mg/l/4h   | Rat              | LC50   |  | Skin 220 mg/kg   | Rabbit                         | LD50                   | Diethylene glycol monobutyl ether | Ingestion 5660 mg/kg   | Rat                 | LD50   |                              | Skin 2700 mg/kg  | Rabbit  | LD50                       | Dibutyl phthalate   | Ingestion 3474 mg/kg       | Mouse | LD50 |  | Inhalation >15.68 mg/l/4h | Rat | LC50 |  | Skin >25000 mg/kg | Rabbit | LD50 |
| 2-Butoxyethanol   | Ingestion 560 mg/kg  | Rat                | LD50  |                     |  |                   |   |                  |  |  |  |                                |                        |                                   |  |                     |  |                              |  |   |                            |   |                            |       |      |  |                           |     |      |  |                   |        |      |
|   | Inhalation 2.21 mg/l/4h  | Rat                | LC50  |                     |  |                   |   |                  |  |  |  |                                |                        |                                   |  |                     |  |                              |  |   |                            |   |                            |       |      |  |                           |     |      |  |                   |        |      |
|   | Skin 220 mg/kg   | Rabbit             | LD50  |                     |  |                   |   |                  |  |  |  |                                |                        |                                   |  |                     |  |                              |  |   |                            |   |                            |       |      |  |                           |     |      |  |                   |        |      |
| Diethylene glycol monobutyl ether                         | Ingestion 5660 mg/kg   | Rat                | LD50  |                     |  |                   |   |                  |  |  |  |                                |                        |                                   |  |                     |  |                              |  |   |                            |   |                            |       |      |  |                           |     |      |  |                   |        |      |
|   | Skin 2700 mg/kg  | Rabbit             | LD50  |                     |  |                   |   |                  |  |  |  |                                |                        |                                   |  |                     |  |                              |  |   |                            |   |                            |       |      |  |                           |     |      |  |                   |        |      |
| Dibutyl phthalate   | Ingestion 3474 mg/kg   | Mouse              | LD50  |                     |  |                   |   |                  |  |  |  |                                |                        |                                   |  |                     |  |                              |  |   |                            |   |                            |       |      |  |                           |     |      |  |                   |        |      |
|   | Inhalation >15.68 mg/l/4h  | Rat                | LC50  |                     |  |                   |   |                  |  |  |  |                                |                        |                                   |  |                     |  |                              |  |   |                            |   |                            |       |      |  |                           |     |      |  |                   |        |      |
|   | Skin >25000 mg/kg  | Rabbit             | LD50  |                     |  |                   |   |                  |  |  |  |                                |                        |                                   |  |                     |  |                              |  |   |                            |   |                            |       |      |  |                           |     |      |  |                   |        |      |
| <b>Likely routes of exposure</b>                          | Skin, eyes, inhalation, ingestion.   |                    |   |                     |  |                   |   |                  |  |  |  |                                |                        |                                   |  |                     |  |                              |  |   |                            |   |                            |       |      |  |                           |     |      |  |                   |        |      |
| <b>Delayed, immediate and chronic effects</b>             | <table> <tr> <td><b>Eye contact</b></td> <td>May cause eye irritation. Diethylene glycol monobutyl ether (CAS no 112-34-5) is an eye irritant (rabbits, OECD 405). 2-Butoxyethanol can cause eye irritation (rabbits, OECD 405).</td> </tr> <tr> <td><b>Skin contact</b></td> <td>May cause skin irritation. Prolonged and repeated contact may cause drying and cracking of the skin. Widespread contact with skin for several hours can cause harmful amounts of material to be absorbed. Diethylene glycol monobutyl ether (CAS no 112-34-5) can cause a mild skin irritation (rabbits, OECD 404). 2-Butoxyethanol can cause skin irritation (rabbits, OECD 404).</td> </tr> <tr> <td><b>Inhalation</b></td> <td>May cause respiratory tract irritation. Excessive inhalation is harmful. High concentrations may cause central nervous system depression characterized by headache, dizziness, vertigo, nausea, drowsiness and fatigue. The severity of symptoms may vary depending on exposure conditions.</td> </tr> <tr> <td><b>Ingestion</b></td> <td>May cause gastro-intestinal irritation with nausea and vomiting.</td> </tr> <tr> <td><b>Respiratory or skin sensitization</b></td> <td>A few cases of sensitization after exposure to Dibutyl phthalate have been reported in humans. May cause an allergic reaction of the skin.</td> </tr> <tr> <td><b>IARC/NTP Classification</b></td> <td>No ingredients listed.</td> </tr> <tr> <td><b>Carcinogenicity</b></td> <td>Ingredients present at levels greater than or equal to 0.1% of this product are not listed as a carcinogen by IARC, ACGIH, NIOSH, NTP or OSHA.</td> </tr> <tr> <td><b>Mutagenicity</b></td> <td>Ingredients in this product present at levels greater than or equal to 0.1% are not known to cause mutagenic effect.</td> </tr> <tr> <td><b>Reproductive toxicity</b></td> <td>Dibutyl phthalate has embryotoxic and fetotoxic effects in animals. It can cause testicular damage in animals. The tests show that this substance possibly causes toxicity to human reproduction or development. 2-butoxyethanol may have negative effects on reproduction and fertility at doses which were severely toxic to the animals (TOXNET).</td> </tr> <tr> <td><b>Specific target organ toxicity - single exposure</b></td> <td>No target organ is listed.</td> </tr> <tr> <td><b>Specific target organ toxicity - repeated exposure</b></td> <td>No target organ is listed.</td> </tr> </table> | <b>Eye contact</b> | May cause eye irritation. Diethylene glycol monobutyl ether (CAS no 112-34-5) is an eye irritant (rabbits, OECD 405). 2-Butoxyethanol can cause eye irritation (rabbits, OECD 405). | <b>Skin contact</b> | May cause skin irritation. Prolonged and repeated contact may cause drying and cracking of the skin. Widespread contact with skin for several hours can cause harmful amounts of material to be absorbed. Diethylene glycol monobutyl ether (CAS no 112-34-5) can cause a mild skin irritation (rabbits, OECD 404). 2-Butoxyethanol can cause skin irritation (rabbits, OECD 404). | <b>Inhalation</b> | May cause respiratory tract irritation. Excessive inhalation is harmful. High concentrations may cause central nervous system depression characterized by headache, dizziness, vertigo, nausea, drowsiness and fatigue. The severity of symptoms may vary depending on exposure conditions. | <b>Ingestion</b> | May cause gastro-intestinal irritation with nausea and vomiting. | <b>Respiratory or skin sensitization</b> | A few cases of sensitization after exposure to Dibutyl phthalate have been reported in humans. May cause an allergic reaction of the skin. | <b>IARC/NTP Classification</b> | No ingredients listed. | <b>Carcinogenicity</b>            | Ingredients present at levels greater than or equal to 0.1% of this product are not listed as a carcinogen by IARC, ACGIH, NIOSH, NTP or OSHA. | <b>Mutagenicity</b> | Ingredients in this product present at levels greater than or equal to 0.1% are not known to cause mutagenic effect. | <b>Reproductive toxicity</b> | Dibutyl phthalate has embryotoxic and fetotoxic effects in animals. It can cause testicular damage in animals. The tests show that this substance possibly causes toxicity to human reproduction or development. 2-butoxyethanol may have negative effects on reproduction and fertility at doses which were severely toxic to the animals (TOXNET). | <b>Specific target organ toxicity - single exposure</b> | No target organ is listed. | <b>Specific target organ toxicity - repeated exposure</b> | No target organ is listed. |       |      |  |                           |     |      |  |                   |        |      |
| <b>Eye contact</b>  | May cause eye irritation. Diethylene glycol monobutyl ether (CAS no 112-34-5) is an eye irritant (rabbits, OECD 405). 2-Butoxyethanol can cause eye irritation (rabbits, OECD 405).  |                    |   |                     |  |                   |   |                  |  |  |  |                                |                        |                                   |  |                     |  |                              |  |   |                            |   |                            |       |      |  |                           |     |      |  |                   |        |      |
| <b>Skin contact</b>                                       | May cause skin irritation. Prolonged and repeated contact may cause drying and cracking of the skin. Widespread contact with skin for several hours can cause harmful amounts of material to be absorbed. Diethylene glycol monobutyl ether (CAS no 112-34-5) can cause a mild skin irritation (rabbits, OECD 404). 2-Butoxyethanol can cause skin irritation (rabbits, OECD 404).   |                    |   |                     |  |                   |   |                  |  |  |  |                                |                        |                                   |  |                     |  |                              |  |   |                            |   |                            |       |      |  |                           |     |      |  |                   |        |      |
| <b>Inhalation</b>   | May cause respiratory tract irritation. Excessive inhalation is harmful. High concentrations may cause central nervous system depression characterized by headache, dizziness, vertigo, nausea, drowsiness and fatigue. The severity of symptoms may vary depending on exposure conditions.  |                    |   |                     |  |                   |   |                  |  |  |  |                                |                        |                                   |  |                     |  |                              |  |   |                            |   |                            |       |      |  |                           |     |      |  |                   |        |      |
| <b>Ingestion</b>  | May cause gastro-intestinal irritation with nausea and vomiting.   |                    |   |                     |  |                   |   |                  |  |  |  |                                |                        |                                   |  |                     |  |                              |  |   |                            |   |                            |       |      |  |                           |     |      |  |                   |        |      |
| <b>Respiratory or skin sensitization</b>                  | A few cases of sensitization after exposure to Dibutyl phthalate have been reported in humans. May cause an allergic reaction of the skin.   |                    |   |                     |  |                   |   |                  |  |  |  |                                |                        |                                   |  |                     |  |                              |  |   |                            |   |                            |       |      |  |                           |     |      |  |                   |        |      |
| <b>IARC/NTP Classification</b>                            | No ingredients listed.   |                    |   |                     |  |                   |   |                  |  |  |  |                                |                        |                                   |  |                     |  |                              |  |   |                            |   |                            |       |      |  |                           |     |      |  |                   |        |      |
| <b>Carcinogenicity</b>                                    | Ingredients present at levels greater than or equal to 0.1% of this product are not listed as a carcinogen by IARC, ACGIH, NIOSH, NTP or OSHA.   |                    |   |                     |  |                   |   |                  |  |  |  |                                |                        |                                   |  |                     |  |                              |  |   |                            |   |                            |       |      |  |                           |     |      |  |                   |        |      |
| <b>Mutagenicity</b>                                       | Ingredients in this product present at levels greater than or equal to 0.1% are not known to cause mutagenic effect.   |                    |   |                     |  |                   |   |                  |  |  |  |                                |                        |                                   |  |                     |  |                              |  |   |                            |   |                            |       |      |  |                           |     |      |  |                   |        |      |
| <b>Reproductive toxicity</b>                              | Dibutyl phthalate has embryotoxic and fetotoxic effects in animals. It can cause testicular damage in animals. The tests show that this substance possibly causes toxicity to human reproduction or development. 2-butoxyethanol may have negative effects on reproduction and fertility at doses which were severely toxic to the animals (TOXNET).   |                    |   |                     |  |                   |   |                  |  |  |  |                                |                        |                                   |  |                     |  |                              |  |   |                            |   |                            |       |      |  |                           |     |      |  |                   |        |      |
| <b>Specific target organ toxicity - single exposure</b>   | No target organ is listed.   |                    |   |                     |  |                   |   |                  |  |  |  |                                |                        |                                   |  |                     |  |                              |  |   |                            |   |                            |       |      |  |                           |     |      |  |                   |        |      |
| <b>Specific target organ toxicity - repeated exposure</b> | No target organ is listed.   |                    |   |                     |  |                   |   |                  |  |  |  |                                |                        |                                   |  |                     |  |                              |  |   |                            |   |                            |       |      |  |                           |     |      |  |                   |        |      |
| <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. These values are not classified according to WHMIS 2015 and OSHA HCS 2012. The acute toxicity estimate (ATE) by inhalation of the mixture was calculated to be greater than 20 mg/L/4h. This value is not classified according to GHS.  |                    |   |                     |  |                   |   |                  |  |  |  |                                |                        |                                   |  |                     |  |                              |  |   |                            |   |                            |       |      |  |                           |     |      |  |                   |        |      |


## 12. Ecological information

|                                  |  |
|----------------------------------|--|
| <b>Ecological toxicity</b>       | <p>Aquatic Invertebrate - <i>Gymnodinium breve</i> (alga) EC50 0.2 mg/L ; 96 h (Dibutyl phthalate)</p> <p>Fish - <i>Oncorhynchus mykiss</i> - Rainbow trout LC50 0.1 mg/L ; 96 h (Dibutyl phthalate)</p> <p>Fish - <i>Oncorhynchus mykiss</i> - Rainbow trout LC50 1474 mg/L; 96 h (2-butoxyethanol)</p> <p>Aquatic invertebrates - <i>Daphnia magna</i> EC50 1550 mg/L; 48 h (2-butoxyethanol)</p> <p>Fish - <i>Branchydanio Renio</i> - fresh water CESO &gt;100 mg/L; 21 d (2-butoxyethanol)</p> <p>Aquatic Invertebrate - <i>Daphnia magna</i> CESO 100mg/L; 21 d (2-butoxyethanol)</p> <p>Algae, <i>Pseudokirchneriella subcapitata</i> EC50 1840 mg/L; 72 h (2-butoxyethanol)</p> <p>Fish - <i>Lepomis macrochirus</i> - Bluegill LC50 1300 mg/L; 96 h (CAS no 112-34-5)</p> |
| <b>Persistence</b>               | No information available for this product.   |
| <b>Degradability</b>             | 2-Butoxyethanol is readily biodegradable 90.4% in 28 days (OECD Guideline 301B). Dibutyl phthalate is readily biodegradable at 99% in 28 days (OECD 301B). Diethylene glycol monobutyl ether is readily biodegradable at 88% in 28 days (OECD 301D).   |
| <b>Bioaccumulative potential</b> | Dibutyl phthalate has potential to bioaccumulate in aquatic organisms (log Koc >3.8). Diethylene glycol monobutyl ether has low potential to bioaccumulate in aquatic organisms with an estimated bioconcentration factor (BCF) of 3. 2-Butoxyethanol is not expected to bioaccumulate based on a low partition coefficient (Log Kow <2).  |
| <b>Mobility in soil</b>          | The estimated Koc value of 0.83 suggests that 2-Butoxyethanol is expected to have high mobility in soil (TOXNET). The estimated log Koc of 0.56 suggests that diethylene glycol monobutyl ether is expected to have high mobility in soil (TOXNET). The Koc value of 3.05-3.14 for dibutyl phthalate suggests that it has a low mobility in soil.  |
| <b>Other adverse effects</b>     | This chemical does not deplete the ozone layer.  |

## 13. Disposal considerations

|  |  |
|--|--|
|  | <p>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.</p> |
|--|--|

## 14. Transport information

|   |  |
|---|--|
| <b>UN Number</b>  | UN 3082  |
| <b>UN Proper Shipping Name</b>                          | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  |
| <b>Environmental hazards</b>                            | Contains an ingredient which is a marine pollutant.  |
| <b>Special precautions for user</b>                     | No information available.  |
| <b>TDG - Transportation of Dangerous Goods (Canada)</b> |  |
| <b>Transport hazard class(es)</b>                       | <br>Class 9 |
| <b>Packing group</b>                                    | III  |

**IMO/IMDG - International Maritime Transport**

|                       |  |
|-----------------------|--|
| <b>Classification</b> | Regulated UN 3082. Environmentally Hazardous Substance, Liquid, N.O.S. Class 9, PG III.<br>Emergency schedules (EmS-No) F-A, S-F |
|-----------------------|--|

**IATA - International Air Transport Association**

|                       |               |
|-----------------------|---------------|
| <b>Classification</b> | Not available |
|-----------------------|---------------|

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 |
|-----------------------------------|----------|------|-----|------|------|
| 2-Butoxyethanol                   | 111-76-2 | X    | X   |      | X    |
| Dibutyl phthalate                 | 84-74-2  | X    | X   |      | X    |
| Diethylene glycol monobutyl ether | 112-34-5 | 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 |
|-----------------------------------|----------|------|--------|-----------|---------------|----------------|----------------|------------|---------|--------------|
| 2-Butoxyethanol                   | 111-76-2 | X    |        |           |               |                |                |            |         |              |
| Dibutyl phthalate                 | 84-74-2  | X    | X      | X         |               |                |                |            |         | X            |
| Diethylene glycol monobutyl ether | 112-34-5 | 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 |
|-------------------|---------|--------|---|
| Dibutyl phthalate | 84-74-2 |        | X                                       |

**Other regulations****WHMIS 1988**

D1A D2A D2B

Class D1A : Very toxic material causing immediate and serious toxic effects

Class D2A : Very toxic material causing other toxic effects

Class D2B : Toxic material causing other toxic effects

**HMIS****NFPA****16. Other information**

|                          |  |
|--------------------------|--|
| <b>Date (YYYY-MM-DD)</b> | GEMINI INDUSTRIES, INC. 2016-01-21   |
| <b>Version</b>           | 01   |
| <b>Other information</b> | <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 Publications, 2007, <a href="http://www.cdc.gov/niosh/npg/npg.html">http://www.cdc.gov/niosh/npg/npg.html</a></li> <li>- IPCS INCHEM, Chemical Safety Information from Intergovernmental Organizations, Canadian Centre for Occupational Health and Safety (CCOHS), Copyright International Programme on Chemical Safety (IPCS), <a href="http://www.inchem.org">http://www.inchem.org</a></li> </ul> <p>ACGIH: American Conference of Governmental Industrial Hygienists<br/> AIHA: American Industrial Hygiene Association<br/> HMIS: Hazardous Materials Identification System<br/> NFPA: National Fire Protection Association<br/> OSHA: Occupational Safety and Health Administration (USA)<br/> NIOSH: National Institute for Occupational Safety and Health<br/> NTP: National Toxicology Program<br/> RSST: Règlement sur la santé et la sécurité du travail (Québec)<br/> GHS: Globally Harmonized System<br/> IARC: International Agency for Research on Cancer<br/> IDLH: Immediately Dangerous to Life or Health<br/> STEL: Short Term Exposure Limit (15 min)<br/> TWA: Time Weighted Averages<br/> WHMIS: Workplace Hazardous Materials Information System</p> <p>To the best of our knowledge, the information contained herein is accurate. However, neither Préventis System 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.</p> |