

# SAFETY DATA SHEET

## GALVAPRIME ETCH PRIMER GREEN

### Section 1. Identification

**GHS product identifier** : GALVAPRIME ETCH PRIMER GREEN  
**Other means of identification** : Not available.  
**Product type** : Liquid.

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

Not applicable.

**Supplier's details** : Berger Paints Singapore  
Private Limited  
22, Benoi Sector  
Singapore 629854  
Tel. : +65 6261 5224  
Fax : +65 6265 6356

**Emergency telephone number (with hours of operation)** : Singapore +65  
96364852

### Section 2. Hazards identification

**Classification of the substance or mixture** : FLAMMABLE LIQUIDS - Category 2  
ACUTE TOXICITY: ORAL - Category 3  
ACUTE TOXICITY: INHALATION - Category 4  
SKIN CORROSION/IRRITATION - Category 2  
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1  
TOXIC TO REPRODUCTION [Unborn child] - Category 2  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) [Narcotic effects] - Category 3  
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2  
AQUATIC TOXICITY (ACUTE) - Category 1  
AQUATIC TOXICITY (CHRONIC) - Category 2  
Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 23.1%  
Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 24.3%

#### GHS label elements

##### **Hazard pictograms**



##### **Signal word**

: Danger

##### **Hazard statements**

: Highly flammable liquid and vapor.  
Toxic if swallowed.  
Harmful if inhaled.  
Causes serious eye damage.  
Causes skin irritation.  
Suspected of damaging the unborn child.  
May cause drowsiness and dizziness.  
May cause damage to organs through prolonged or repeated exposure.  
Very toxic to aquatic life.  
Toxic to aquatic life with long lasting effects.

## Section 2. Hazards identification

### Precautionary statements

- Prevention** : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wear protective gloves. Wear eye or face protection. Keep away from heat, sparks, open flames and hot surfaces. - No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Do not breathe vapor. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.
- Response** : Collect spillage. Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. If skin irritation occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.
- Storage** : Store locked up. Store in a well-ventilated place. Keep cool.
- Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Other hazards which do not result in classification** : None known.

## Section 3. Composition/information on ingredients

**Substance/mixture** : Mixture

**Other means of identification** : Not available.

### CAS number/other identifiers

**CAS number** : Not applicable.

**EC number** : Mixture.

**Product code** : SG-FVE160030XXX

| Ingredient name                              | %       | CAS number |
|--|---------|------------|
| toluene                                      | 15 - 30 | 108-88-3   |
| acetone                                      | 15 - 30 | 67-64-1    |
| 2-methylpropan-1-ol                          | 15 - 30 | 78-83-1    |
| xylene                                       | 1 - 5   | 1330-20-7  |
| [3-(2,3-epoxypropoxy)propyl]trimethoxysilane | 1 - 5   | 2530-83-8  |
| Carbon black                                 | 0 - 1   | 1333-86-4  |
| phenol                                       | 0 - 1   | 108-95-2   |

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 or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

**Chemical formula** : Not applicable.

## Section 4. First aid measures

### Description of necessary first aid measures

- Eye contact** : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.
- Inhalation** : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. 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.
- Skin contact** : Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of 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. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician. 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 damage.
- Inhalation** : Harmful if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system.
- Skin contact** : Causes skin irritation.
- Ingestion** : Toxic if swallowed. Can cause central nervous system (CNS) depression. May cause burns to mouth, throat and stomach.

#### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
pain  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

## Section 4. First aid measures

- Skin contact** : Adverse symptoms may include the following:  
 pain or irritation  
 redness  
 blistering may occur  
 reduced fetal weight  
 increase in fetal deaths  
 skeletal malformations
- Ingestion** : Adverse symptoms may include the following:  
 stomach pains  
 reduced fetal weight  
 increase in fetal deaths  
 skeletal malformations

### Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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** : Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

- Specific hazards arising from the chemical** : Highly flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard. This material is very toxic to aquatic life. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
 carbon dioxide  
 carbon monoxide  
 metal oxide/oxides

- 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.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised 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 and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

### Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. 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. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. 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). Use spark-proof tools and explosion-proof equipment. 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). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid release to the environment. 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. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general 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.

## Section 7. Handling and storage

**Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

| Ingredient name     | Exposure limits  |
|---------------------|--|
| toluene             | <b>Factories Order (PEL) (Singapore, 2/2006).</b><br>PEL (long term): 50 ppm 8 hours.  |
| acetone             | <b>Factories Order (PEL) (Singapore, 2/2006).</b><br>PEL (long term): 188 mg/m <sup>3</sup> 8 hours.   |
| 2-methylpropan-1-ol | <b>Factories Order (PEL) (Singapore, 2/2006).</b><br>PEL (long term): 750 ppm 8 hours.<br>PEL (long term): 1780 mg/m <sup>3</sup> 8 hours.<br>PEL (short term): 2380 mg/m <sup>3</sup> 15 minutes.<br>PEL (short term): 1000 ppm 15 minutes. |
| xylene              | <b>Factories Order (PEL) (Singapore, 2/2006).</b><br>PEL (long term): 50 ppm 8 hours.<br>PEL (long term): 152 mg/m <sup>3</sup> 8 hours.   |
| Carbon black        | <b>Factories Order (PEL) (Singapore, 2/2006).</b><br>PEL (long term): 100 ppm 8 hours.<br>PEL (long term): 434 mg/m <sup>3</sup> 8 hours.<br>PEL (short term): 651 mg/m <sup>3</sup> 15 minutes.<br>PEL (short term): 150 ppm 15 minutes.    |
| phenol              | <b>Factories Order (PEL) (Singapore, 2/2006).</b><br>PEL (long term): 3.5 mg/m <sup>3</sup> 8 hours.   |
|                     | <b>Factories Order (PEL) (Singapore, 2/2006).</b><br>PEL (long term): 5 ppm 8 hours.<br>PEL (long term): 19 mg/m <sup>3</sup> 8 hours.   |

**Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

**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 they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### Individual protection measures

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.



## 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 and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.
- 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.
- 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. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

## Section 9. Physical and chemical properties

### Appearance

- Physical state** : Liquid.
- Color** : Not available.
- Odor** : Not available.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point** : Not available.
- Boiling point** : Not available.
- Flash point** : Closed cup: 5°C (41°F)
- Burning time** : Not applicable.
- Burning rate** : Not applicable.
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Not available.
- Vapor pressure** : Not available.
- Vapor density** : Not available.
- Density** : 0.99 g/cm<sup>3</sup>
- Solubility** : Not available.
- Solubility in water** : Not available.
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.

## Section 9. Physical and chemical properties

**SADT** : Not available.

**Viscosity** : Not available.

## 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.

**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.

**Incompatible materials** : Reactive or incompatible with the following materials:  
oxidizing materials

**Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

**SADT** : Not available.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

| Product/ingredient name                       | Result                | Species | Dose                    | Exposure |
|---|-----------------------|---------|-------------------------|----------|
| toluene                                       | LC50 Inhalation Gas.  | Rat     | 8800 ppm                | 4 hours  |
|   | LC50 Inhalation Vapor | Rat     | 49 g/m <sup>3</sup>     | 4 hours  |
|   | LD50 Dermal           | Rabbit  | 12124 mg/kg             | -        |
| acetone                                       | LD50 Oral             | Rat     | 636 mg/kg               | -        |
|   | LD50 Dermal           | Rabbit  | 20000 mg/kg             | -        |
|   | LD50 Oral             | Rat     | 5800 mg/kg              | -        |
| 2-methylpropan-1-ol                           | LC50 Inhalation Gas.  | Rat     | 8000 ppm                | 4 hours  |
|   | LC50 Inhalation Vapor | Rat     | 19200 mg/m <sup>3</sup> | 4 hours  |
|   | LD50 Dermal           | Rabbit  | 3400 mg/kg              | -        |
| xylene  | LD50 Oral             | Rat     | 2460 mg/kg              | -        |
|   | LC50 Inhalation Gas.  | Rat     | 5000 ppm                | 4 hours  |
|   | LD50 Oral             | Rat     | 4300 mg/kg              | -        |
| [3-(2,3-epoxypropoxy)propyl] trimethoxysilane | LD50 Oral             | Rat     | 7.01 g/kg               | -        |
| Carbon black                                  | LD50 Oral             | Rat     | >8000 ng/kg             | -        |
| phenol  | LC50 Inhalation Vapor | Rat     | 316 mg/m <sup>3</sup>   | 4 hours  |
|   | LD50 Dermal           | Rabbit  | 630 mg/kg               | -        |
|   | LD50 Dermal           | Rat     | 669 mg/kg               | -        |
|   | LD50 Oral             | Rat     | 317 mg/kg               | -        |

#### Irritation/Corrosion

| Product/ingredient name | Result                 | Species | Score | Exposure                 | Observation |
|-------------------------|------------------------|---------|-------|--------------------------|-------------|
| toluene                 | Eyes - Mild irritant   | Rabbit  | -     | 0.5 minutes              | -           |
|                         | Eyes - Mild irritant   | Rabbit  | -     | 100 milligrams           | -           |
|                         | Eyes - Severe irritant | Rabbit  | -     | 870 Micrograms           | -           |
|                         | Skin - Mild irritant   | Pig     | -     | 24 hours 2 milligrams    | -           |
|                         |                        |         |       | 24 hours 250 microliters | -           |



## Section 11. Toxicological information

|   |                          |        |   |                          |   |
|---|--------------------------|--------|---|--------------------------|---|
| acetone                                       | Skin - Mild irritant     | Rabbit | - | 435 milligrams           | - |
|   | Skin - Moderate irritant | Rabbit | - | 24 hours 20 milligrams   | - |
|   | Skin - Moderate irritant | Rabbit | - | 500 milligrams           | - |
|   | Eyes - Mild irritant     | Human  | - | 186300 parts per million | - |
|   | Eyes - Mild irritant     | Rabbit | - | 10 microliters           | - |
|   | Eyes - Moderate irritant | Rabbit | - | 24 hours 20 milligrams   | - |
|   | Eyes - Severe irritant   | Rabbit | - | 20 milligrams            | - |
| xylene  | Skin - Mild irritant     | Rabbit | - | 24 hours 500 milligrams  | - |
|   | Skin - Mild irritant     | Rabbit | - | 395 milligrams           | - |
|   | Eyes - Mild irritant     | Rabbit | - | 87 milligrams            | - |
|   | Eyes - Severe irritant   | Rabbit | - | 24 hours 5 milligrams    | - |
|   | Skin - Mild irritant     | Rat    | - | 8 hours 60 microliters   | - |
| [3-(2,3-epoxypropoxy)propyl] trimethoxysilane | Skin - Moderate irritant | Rabbit | - | 24 hours 500 milligrams  | - |
|   | Skin - Moderate irritant | Rabbit | - | 100 Percent              | - |
|   | Eyes - Mild irritant     | Rabbit | - | 100 milligrams           | - |
| phenol  | Skin - Mild irritant     | Rabbit | - | 500 milligrams           | - |
|   | Eyes - Mild irritant     | Rabbit | - | 0.5 minutes              | - |
|   | Eyes - Severe irritant   | Rabbit | - | 5 milligrams             | - |
|   | Skin - Severe irritant   | Pig    | - | 0.5 minutes              | - |
|   | Skin - Severe irritant   | Pig    | - | 400 microliters          | - |
|   | Skin - Mild irritant     | Rabbit | - | 100 milligrams           | - |
|   | Skin - Severe irritant   | Rabbit | - | 535 milligrams           | - |

### Sensitization

Not available.

### Mutagenicity

Not available.

### Carcinogenicity

Not available.

### Reproductive toxicity

Not available.

### Teratogenicity

Not available.

### Specific target organ toxicity (single exposure)

## Section 11. Toxicological information

| Name             | Category   | Route of exposure | Target organs                                     |
|------------------|------------|-------------------|---|
| toluene          | Category 3 | Not applicable.   | Narcotic effects                                  |
| Acetone          | Category 3 | Not applicable.   | Narcotic effects                                  |
| Isobutyl alcohol | Category 3 | Not applicable.   | Respiratory tract irritation and Narcotic effects |

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

**Information on the likely routes of exposure** : Not available.

### Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : Harmful if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system.
- Skin contact** : Causes skin irritation.
- Ingestion** : Toxic if swallowed. Can cause central nervous system (CNS) depression. May cause burns to mouth, throat and stomach.

### Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:  
pain  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:  
pain or irritation  
redness  
blistering may occur  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:  
stomach pains  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

**Potential immediate effects** : Not available.

## Section 11. Toxicological information

**Potential delayed effects** : Not available.

### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

### Potential chronic health effects

Not available.

**General** : May cause damage to organs through prolonged or repeated exposure.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Teratogenicity** : Suspected of damaging the unborn child.

**Developmental effects** : No known significant effects or critical hazards.

**Fertility effects** : No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

| Route               | ATE value     |
|---------------------|---------------|
| Oral                | 119.4 mg/kg   |
| Dermal              | 19134.7 mg/kg |
| Inhalation (gases)  | 12824.1 ppm   |
| Inhalation (vapors) | 45.88 mg/l    |

## Section 12. Ecological information

### Toxicity

| Product/ingredient name | Result   | Species  | Exposure |
|-------------------------|--|--|----------|
| toluene                 | Acute EC50 433 ppm Marine water                | Algae - Skeletonema costatum   | 96 hours |
|                         | Acute EC50 12500 µg/l Fresh water              | Algae - Pseudokirchneriella subcapitata                                | 72 hours |
|                         | Acute EC50 11600 µg/l Fresh water              | Crustaceans - Gammarus pseudolimnaeus - Adult                          | 48 hours |
|                         | Acute EC50 6000 µg/l Fresh water               | Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling)    | 48 hours |
|                         | Acute LC50 5500 µg/l Fresh water               | Fish - Oncorhynchus kisutch - Fry                                      | 96 hours |
|                         | Chronic NOEC 500000 µg/l Fresh water           | Algae - Pseudokirchneriella subcapitata                                | 96 hours |
| acetone                 | Chronic NOEC 1000 µg/l Fresh water             | Daphnia - Daphnia magna  | 21 days  |
|                         | Acute EC50 20.565 mg/l Marine water            | Algae - Ulva pertusa   | 96 hours |
|                         | Acute LC50 6000000 µg/l Fresh water            | Crustaceans - Gammarus pulex   | 48 hours |
|                         | Acute LC50 10000 µg/l Fresh water              | Daphnia - Daphnia magna  | 48 hours |
|                         | Acute LC50 100 mg/l Fresh water                | Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling) | 96 hours |
|                         | Chronic NOEC 4.95 mg/l Marine water            | Algae - Ulva pertusa   | 96 hours |
| 2-methylpropan-1-ol     | Chronic NOEC 0.1 ml/L Fresh water              | Daphnia - Daphnia magna - Neonate                                      | 21 days  |
|                         | Acute LC50 600000 µg/l Marine water            | Crustaceans - Artemia salina - Nauplii                                 | 48 hours |
|                         | Acute LC50 1030000 to 1200000 µg/l Fresh water | Daphnia - Daphnia magna - Neonate                                      | 48 hours |
|                         | Acute LC50 1330000 to 1520000 µg/l             | Fish - Oncorhynchus mykiss   | 96 hours |

## Section 12. Ecological information

|                                    |  |  |          |
|------------------------------------|--|--|----------|
| xylene                             | Fresh water  | Daphnia - Daphnia magna                    | 21 days  |
|                                    | Chronic NOEC 4000 µg/l Fresh water                                 | Crustaceans - Palaemonetes pugio           | 48 hours |
| Carbon black phenol                | Acute LC50 8500 µg/l Marine water                                  | Fish - Pimephales promelas                 | 96 hours |
|                                    | Acute LC50 13400 µg/l Fresh water                                  | Algae                                      | 3 days   |
|                                    | NOEC 10000 mg/l  | Algae - Pseudokirchneriella subcapitata    | 96 hours |
|                                    | Acute EC50 61.1 µg/l Fresh water                                   | Algae - Hormosira banksii - Gamete         | 72 hours |
|                                    | Acute EC50 36 mg/l Marine water                                    | Aquatic plants - Lemna minor               | 4 days   |
|                                    | Acute EC50 12000 µg/l Fresh water                                  | Daphnia - Daphnia magna                    | 48 hours |
|                                    | Acute EC50 4200 µg/l Fresh water                                   | Crustaceans - Ceriodaphnia dubia - Neonate | 48 hours |
|                                    | Acute LC50 3100 µg/l Fresh water                                   | Fish - Cyprinus carpio - Larvae            | 96 hours |
| Acute LC50 1.75 µg/l Fresh water   | Algae - Pseudokirchneriella subcapitata - Exponential growth phase | 72 hours                                   |          |
| Chronic EC10 969 µg/l Fresh water  | Daphnia - Daphnia magna - Neonate                                  | 21 days                                    |          |
| Chronic IC10 2.38 ng/L Fresh water | Fish - Oncorhynchus mykiss   | 90 days                                    |          |
| Chronic NOEC 118 µg/l Fresh water  |  |  |          |

### Persistence/degradability

Not available.

### Bioaccumulative potential

| Product/ingredient name | LogP <sub>ow</sub> | BCF          | Potential |
|-------------------------|--------------------|--------------|-----------|
| toluene                 | 2.73               | 8.317637711  | low       |
| acetone                 | -0.24              | -            | low       |
| 2-methylpropan-1-ol     | 0.76               | -            | low       |
| xylene                  | 3.16               | 8.1 to 25.9  | low       |
| phenol                  | 1.46               | 17.378008287 | low       |

### Mobility in soil










**Soil/water partition coefficient (K<sub>oc</sub>)** : 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

|                                   | UN   | IMDG  | IATA   |
|-----------------------------------|--|---|--|
| <b>UN number</b>                  | UN1992   | UN1992  | UN1992   |
| <b>UN proper shipping name</b>    | FLAMMABLE LIQUID, TOXIC, N.O.S. (toluene, Carbon black)  | FLAMMABLE LIQUID, TOXIC, N.O.S. (toluene, Carbon black). Marine pollutant (toluene, xylene)   | FLAMMABLE LIQUID, TOXIC, N.O.S. (toluene, Carbon black)  |
| <b>Transport hazard class(es)</b> | 3 (6.1)<br><br><br> | 3 (6.1)<br><br><br> | 3 (6.1)<br><br><br> |
| <b>Packing group</b>              | I  | I   | I  |
| <b>Environmental hazards</b>      | Yes.   | Yes.  | Yes.   |
| <b>Additional information</b>     | -  | -   | -  |

**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.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** : Not available.

## Section 15. Regulatory information

**Safety, health and environmental regulations specific for the product** : No known specific national and/or regional regulations applicable to this product (including its ingredients).

## Section 16. Other information

### History

**Date of printing** : 03-05-2021.

**Date of issue/Date of revision** : 03-05-2021.

**Date of previous issue** : 15-12-2017.

**Version** : 2.03

**Key to abbreviations** :

- ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IATA = International Air Transport Association
- IBC = Intermediate Bulk Container
- IMDG = International Maritime Dangerous Goods
- LogPow = logarithm of the octanol/water partition coefficient
- MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
- UN = United Nations

**References** : Not available.

☑ 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.