

SAFETY DATA SHEET

Willowood Propanil 4SC

Section 1. Identification

| | |
|--------------------------------------|--|
| GHS product identifier | : Willowood Propanil 4SC |
| Chemical name | : Propanil ({N-3,4-dichlorophenyl}propanamide) |
| Product code | : Not available. |
| Other means of identification | : Acetanilide Herbicide |
| EPA Registration Number | : 87290-18 |
| EPA Signal Word | : CAUTION |
| Product type | : Liquid. |

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

Identified uses : Herbicide.

Supplier's details : Willowood, LLC
1887 Whitney Mesa Drive \$9740,
Henderson, NV 86014-2069

CS@genericcropscience.com

Emergency telephone number (with hours of operation) : CHEMTREC, U.S.: 1-800-424-9300 International: +1-703-527-3887
24/7 Health Emergencies: Call 800-858-7378 (National Pesticide Information Center)

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : ACUTE TOXICITY (oral) - Category 4
SKIN SENSITIZATION - Category 1
AQUATIC HAZARD (ACUTE) - Category 1
AQUATIC HAZARD (LONG-TERM) - Category 3

GHS label elements

Hazard pictograms :



Signal word : Warning

Hazard statements : H302 - Harmful if swallowed.
H317 - May cause an allergic skin reaction.
H400 - Very toxic to aquatic life.
H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements

Section 2. Hazards identification

| | |
|---|---|
| Prevention | : P280 - Wear protective gloves. P273 - Avoid release to the environment. P261 - Avoid breathing vapor. P270 - Do not eat, drink or smoke when using this product. P264 - Wash hands thoroughly after handling. P272 (OSHA) - Contaminated work clothing must not be allowed out of the workplace. |
| Response | : P391 - Collect spillage. P301 + P312 + P330 - IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth. P302 + P352 + P363 - IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. P333 + P313 - If skin irritation or rash occurs: Get medical attention. |
| Storage | : Not applicable. |
| Disposal | : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations. |
| Hazards not otherwise classified | : None known. |

Section 3. Composition/information on ingredients

| | |
|--------------------------------------|--|
| Substance/mixture | : Mixture |
| Chemical name | : Propanil ({N-3,4-dichlorophenyl}propanamide) |
| Other means of identification | : Acetanilide Herbicide |

| Ingredient name | % | CAS number |
|--|-----------|-------------|
| Propanil | ≥25 - ≤50 | 709-98-8 |
| Propane-1,2-diol | ≥3 - ≤5 | 57-55-6 |
| Poly(oxy-1,2-ethanediyl), α-sulfo-ω-[2,4,6-tris(1-phenylethyl)phenoxy]-, ammonium salt (1:1) | ≥3 - ≤5 | 119432-41-6 |
| Oxirane, 2-methyl-, polymer with oxirane | ≥1 - ≤3 | 9003-11-6 |
| 1,2-Benzisothiazol-3(2H)-one | ≤0.1 | 2634-33-5 |

The exact percentage (concentration) in the composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.

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.

Section 4. First aid measures

Description of necessary first aid measures

| | |
|--------------------|--|
| Eye contact | : 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 20 minutes. Get medical attention if irritation occurs. |
| Inhalation | : Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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. Get medical attention if adverse health effects persist or are severe. 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. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. |

Section 4. First aid measures

- Skin contact** : Wash with plenty of soap and water. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 20 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or 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** : No known significant effects or critical hazards.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : May cause an allergic skin reaction.
- Ingestion** : Harmful if swallowed.

Over-exposure signs/symptoms

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
- Ingestion** : No known significant effects or critical hazards.

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

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : In case of fire, use water spray (fog), foam, dry chemical or CO₂.
- Unsuitable extinguishing media** : None known.

- Specific hazards arising from the chemical** : This material is very toxic to aquatic life. This material is harmful 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.

Section 5. Fire-fighting measures

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
 carbon dioxide
 carbon monoxide
 nitrogen oxides
 sulfur oxides
 halogenated compounds
 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.
- 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. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains 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

- 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). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Section 7. Handling and storage

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. See also Section 8 for additional information on hygiene measures. Remove contaminated clothing and protective equipment before entering eating areas.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. 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. 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. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

| Ingredient name | Exposure limits |
|--|--|
| Propanil Propane-1,2-diol | None. AIHA WEEL (United States, 7/2018). TWA: 10 mg/m ³ 8 hours. |
| Poly(oxy-1,2-ethanediyl), α-sulfo-ω-[2,4,6-tris(1-phenylethyl)phenoxy]-, ammonium salt (1:1) Oxirane, 2-methyl-, polymer with oxirane 1,2-Benzisothiazol-3(2H)-one | None. None. |

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

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. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

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: safety glasses with side-shields.

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.

Section 8. Exposure controls/personal protection

- 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** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Liquid.
- Color** : Light tan.
- Odor** : Slight
- Odor threshold** : Not available.
- pH** : 5 to 6.5
- Melting point** : Not available.
- Boiling point** : Not available.
- Flash point** : Not flammable.
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Not flammable.
- Lower and upper explosive (flammable) limits** : Not flammable.
- Vapor pressure** : Not available.
- Vapor density** : Not available.
- Relative density** : >1.2
- Solubility** : Soluble in the following materials: cold water and hot water.
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Not flammable.
- Decomposition temperature** : Not available.
- Viscosity** : Not available.
- Flow time (ISO 2431)** : 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** : No specific data.
- Incompatible materials** : Reactive or incompatible with the following materials: oxidizing materials, acids and alkalis.

Section 10. Stability and reactivity

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

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|--|-----------------------|---------|-----------------------|----------|
| Propanil | LD50 Dermal | Rabbit | 4830 mg/kg | - |
| | LD50 Dermal | Rat | >5 g/kg | - |
| Propane-1,2-diol | LD50 Oral | Rat | 367 mg/kg | - |
| | LD50 Dermal | Rabbit | 20800 mg/kg | - |
| Oxirane, 2-methyl-, polymer with oxirane | LD50 Oral | Rat | 20 g/kg | - |
| | LC50 Inhalation Vapor | Rat | 320 mg/m ³ | 4 hours |
| 1,2-Benzisothiazol-3(2H)-one | LD50 Oral | Rat | 5700 mg/kg | - |
| | LD50 Oral | Rat | 1020 mg/kg | - |

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|------------------------------|----------------------|---------|-------|-------------|-------------|
| 1,2-Benzisothiazol-3(2H)-one | Skin - Mild irritant | Human | - | 48 hours 5% | - |

Sensitization

There is no data available.

Mutagenicity

There is no data available.

Carcinogenicity

There is no data available.

Reproductive toxicity

There is no data available.

Teratogenicity

There is no data available.

Specific target organ toxicity (single exposure)

There is no data available.

Specific target organ toxicity (repeated exposure)

There is no data available.

Aspiration hazard

There is no data available.

Information on the likely routes of exposure : Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : May cause an allergic skin reaction.
- Ingestion** : Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : No known significant effects or critical hazards.

Section 11. Toxicological information

- Skin contact** : Adverse symptoms may include the following:
irritation
redness
- Ingestion** : No known significant effects or critical hazards.

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

Short term exposure

- Potential immediate effects** : No known significant effects or critical hazards.
- Potential delayed effects** : No known significant effects or critical hazards.

Long term exposure

- Potential immediate effects** : No known significant effects or critical hazards.
- Potential delayed effects** : No known significant effects or critical hazards.

Potential chronic health effects

- General** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : No known significant effects or critical hazards.
- 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 | 889.58 mg/kg |

Section 12. Ecological information

Toxicity

| Product/ingredient name | Result | Species | Exposure |
|------------------------------|--------------------------------------|--|----------|
| Propanil | Acute EC50 0.09 ug/ml Fresh water | Algae - Chlorella pyrenoidosa - Exponential growth phase | 4 days |
| | Acute EC50 0.29 mg/L Fresh water | Algae - Scenedesmus acutus | 72 hours |
| | Acute EC50 1.2 ppm Fresh water | Daphnia - Daphnia magna | 48 hours |
| | Acute LC50 1520 µg/L Fresh water | Crustaceans - Ceriodaphnia dubia | 48 hours |
| | Acute LC50 0.43 ppm Fresh water | Fish - Ictalurus punctatus | 96 hours |
| | Chronic NOEC 58 µg/L Fresh water | Algae - Scenedesmus sp. | 3 days |
| | Chronic NOEC 19 ppb | Fish - Pimephales promelas | 35 days |
| Propane-1,2-diol | Acute EC50 >110 ppm Fresh water | Daphnia - Daphnia magna | 48 hours |
| | Acute LC50 1020000 µg/L Fresh water | Crustaceans - Ceriodaphnia dubia | 48 hours |
| | Acute LC50 710000 µg/L Fresh water | Fish - Pimephales promelas | 96 hours |
| 1,2-Benzisothiazol-3(2H)-one | Acute EC50 97 ppb Fresh water | Daphnia - Daphnia magna | 48 hours |
| | Acute LC50 10 to 20 mg/L Fresh water | Crustaceans - Ceriodaphnia dubia | 48 hours |
| | Acute LC50 167 ppb Fresh water | Fish - Oncorhynchus mykiss | 96 hours |

Persistence and degradability

Section 12. Ecological information

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|-------------------------|-------------------|------------|------------------|
| Propanil | - | - | Readily |

Bioaccumulative potential

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|-------------------------|--------------------|-------|-----------|
| Propanil | 3.07 | 69.18 | low |
| Propane-1,2-diol | -1.07 | - | low |

Mobility in soil

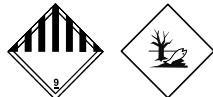
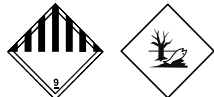
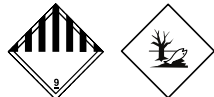
Soil/water partition coefficient (K_{oc}) : Not available.

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 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 empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

| | DOT Classification | IMDG | IATA |
|----------------------------|--|--|--|
| UN number | UN3082 | UN3082 | UN3082 |
| UN proper shipping name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Propanil) | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Propanil). Marine pollutant (Propanil) | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Propanil) |
| Transport hazard class(es) | 9  | 9  | 9  |
| Packing group | III | III | III |
| Environmental hazards | Yes. | Yes. | Yes. |

AERG : 171

Additional information

DOT Classification : Non-bulk packages of this product are not regulated as hazardous materials unless transported by inland waterway. This product is not regulated as a hazardous material when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of §§ 173.24 and 173.24a.



Section 14. Transport information

- IMDG** : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.
- IATA** : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.
- 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.

Section 15. Regulatory information

- U.S. Federal regulations** : **United States inventory (TSCA 8b):** All components are listed or exempted.
Clean Water Act (CWA) 311: Styrene; Acetaldehyde; Propylene oxide; Sodium hydroxide
- Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)** : Listed
- Clean Air Act Section 602 Class I Substances** : Not listed
- Clean Air Act Section 602 Class II Substances** : Not listed
- DEA List I Chemicals (Precursor Chemicals)** : Not listed
- DEA List II Chemicals (Essential Chemicals)** : Not listed

SARA 302/304

Composition/information on ingredients

| Name | EHS | SARA 302 TPQ | | SARA 304 RQ | |
|-----------------|------|--------------|-----------|-------------|-----------|
| | | (lbs) | (gallons) | (lbs) | (gallons) |
| Ethylene oxide | Yes. | 1000 | - | 10 | - |
| Propylene oxide | Yes. | 10000 | 1444.3 | 100 | 14.4 |

SARA 304 RQ : 1248439.5 lbs / 566791.5 kg [113432.2 gal / 429387.5 L]

SARA 311/312

Classification : ACUTE TOXICITY (oral) - Category 4
SKIN SENSITIZATION - Category 1

Composition/information on ingredients

| Name | Classification |
|--|--|
| Propanil Poly(oxy-1,2-ethanediyl), α-sulfo-ω-[2,4,6-tris(1-phenylethyl)phenoxy]-, ammonium salt (1:1) 1,2-Benzisothiazol-3(2H)-one | ACUTE TOXICITY (oral) - Category 4 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A ACUTE TOXICITY (oral) - Category 4 SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 SKIN SENSITIZATION - Category 1 |

SARA 313




Section 15. Regulatory information

| | Product name | CAS number |
|--|---------------------|-------------------|
| Form R - Reporting requirements | Propanil | 709-98-8 |
| Supplier notification | Propanil | 709-98-8 |

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

- Massachusetts** : None of the components are listed.
New York : None of the components are listed.
New Jersey : The following components are listed: Propanil; Propane-1,2-diol
Pennsylvania : The following components are listed: Propane-1,2-diol
California Prop. 65

 **WARNING:** This product can expose you to chemicals including Ethylene oxide, which is known to the State of California to cause cancer and birth defects or other reproductive harm. This product can expose you to chemicals including Styrene, Diethanolamine, 1,4-Dioxane, Acetaldehyde and Propylene oxide, which are known to the State of California to cause cancer, and Ethenediol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Section 16. Other information

Procedure used to derive the classification

| Classification | Justification |
|---|----------------------|
| ACUTE TOXICITY (oral) - Category 4 | Calculation method |
| SKIN SENSITIZATION - Category 1 | Calculation method |
| AQUATIC HAZARD (ACUTE) - Category 1 | Calculation method |
| AQUATIC HAZARD (LONG-TERM) - Category 3 | Calculation method |

History

- Date of issue mm/dd/yyyy** : 09/15/2019
Date of previous issue : 11/15/2015
Version : 2
Prepared by : KMK Regulatory Services Inc.
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 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
 UN = United Nations

Notice to reader

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.