

# Franklin International


## Safety Data Sheet

### GREENchoice Cove Base Adhesive

#### Section 1. Identification

<b>GHS product identifier</b>	: GREENchoice Cove Base Adhesive
<b>Physical state</b>	: Liquid.
<b>Address</b>	: Franklin International 2020 Bruck Street Columbus OH 43207
<b>Contact person</b>	: Franklin Technical Services
<b>Telephone</b>	: (800) 877-4583
<b>In case of emergency</b>	: Franklin Security (614) 445-1300
<b>e-mail address of person responsible for this SDS</b>	: SDS@FranklinInternational.com
<b>Reference number</b>	: 3638
<b>Product code</b>	: 3401
<b>Date of revision</b>	: 2/5/2019
<b>Safety Data Sheets are available online at</b>	: www.FranklinInternational.com
<b>Chemtrec (24 Hour)</b>	: (800) 424 - 9300
<b>Chemtrec International</b>	: (703) 527 - 3887
<b>Relevant identified uses of the substance or mixture and uses advised against</b>	
	Not applicable.

#### Section 2. Hazards identification

<b>OSHA/HCS status</b>	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
<b>Classification of the substance or mixture</b>	: ACUTE TOXICITY (inhalation) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SKIN SENSITIZATION - Category 1B SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (kidneys) (oral) - Category 2
<b>GHS label elements</b>	
<b>Hazard pictograms</b>	: 
<b>Signal word</b>	: Warning
<b>Hazard statements</b>	: Harmful if inhaled. Causes serious eye irritation. Causes skin irritation. May cause an allergic skin reaction. May cause damage to organs through prolonged or repeated exposure if swallowed. (kidneys)

## Section 2. Hazards identification

### Precautionary statements

- Prevention** : Wear protective gloves. Wear eye or face protection. Use only outdoors or in a well-ventilated area. Do not breathe vapor. Wash hands thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace.
- Response** : Get medical attention if you feel unwell. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash 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. If eye irritation persists: Get medical attention.
- Storage** : Not applicable.
- Disposal** : 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

Ingredient name	%	CAS number
2-diethylaminoethanol	≤3	100-37-8
ethanediol	≤1	107-21-1

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

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health 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 10 minutes. Get medical attention.
- Inhalation** : 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. Get medical attention following exposure or if feeling unwell. If necessary, call a poison center or physician. 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.
- Skin contact** : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

## Section 4. First aid measures

- 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 following exposure or if feeling unwell. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

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

#### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness
- Ingestion** : No specific data.

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

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. 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. 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 an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.
- Specific hazards arising from the chemical** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
nitrogen 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.

## Section 5. Fire-fighting measures

**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).

### 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. 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). 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 breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. 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.

**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.

**Conditions for safe storage, including any incompatibilities** : Do not store below the following temperature: 0°C (32°F). 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
2-diethylaminoethanol	<p><b>ACGIH TLV (United States, 3/2018). Absorbed through skin.</b>            TWA: 2 ppm 8 hours.            TWA: 9.6 mg/m<sup>3</sup> 8 hours.</p> <p><b>OSHA PEL 1989 (United States, 3/1989). Absorbed through skin.</b>            TWA: 10 ppm 8 hours.            TWA: 50 mg/m<sup>3</sup> 8 hours.</p> <p><b>NIOSH REL (United States, 10/2016). Absorbed through skin.</b>            TWA: 10 ppm 10 hours.            TWA: 50 mg/m<sup>3</sup> 10 hours.</p> <p><b>OSHA PEL (United States, 5/2018). Absorbed through skin.</b>            TWA: 10 ppm 8 hours.            TWA: 50 mg/m<sup>3</sup> 8 hours.</p>
ethanediol	<p><b>OSHA PEL 1989 (United States, 3/1989).</b>            CEIL: 50 ppm            CEIL: 125 mg/m<sup>3</sup></p> <p><b>ACGIH TLV (United States, 3/2018).</b>            STEL: 10 mg/m<sup>3</sup> 15 minutes. Form: Inhalable fraction. Aerosol only.            STEL: 50 ppm 15 minutes. Form: Vapor fraction            TWA: 25 ppm 8 hours. Form: Vapor fraction</p>

#### **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.

#### **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. 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: chemical splash goggles.

##### **Skin protection**

###### **Hand protection**

- : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

###### **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. [Paste.]
- Color** : Beige.
- Odor** : Characteristic.
- Odor threshold** : Not available.
- pH** : 6 to 8
- Melting point** : Not available.
- Boiling point** : 100°C (212°F)
- Flash point** : Closed cup: >93.333°C (>200°F) [Setaflash.]
- VOC (less water, less exempt solvents)** : 48.71 g/l
- Volatility** : 27.23% (w/w)
- Relative density** : 1.38779

## 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** : No specific data.
- 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
2-diethylaminoethanol	LC50 Inhalation Vapor	Rat	4600 g/m <sup>3</sup>	4 hours
	LD50 Oral	Rat	1300 mg/kg	-
ethanediol	LC50 Inhalation Vapor	Rat	10.92 mg/l	4 hours
	LD50 Oral	Rat	4700 mg/kg	-

#### Irritation/Corrosion

## Section 11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
2-diethylaminoethanol	Eyes - Severe irritant	Rabbit	-	5 milligrams	-
	Skin - Mild irritant	Rabbit	-	500 milligrams	-
ethanediol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Mild irritant	Rabbit	-	1 hours 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	6 hours 1440 milligrams	-
	Skin - Mild irritant	Rabbit	-	555 milligrams	-

### Conclusion/Summary

- Skin** : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
- Eyes** : This product may irritate eyes upon contact.
- Respiratory** : Inhalation of oil mist or vapors at elevated temperatures may cause respiratory irritation.

### Sensitization

Not available.

### Mutagenicity

Not available.

### Carcinogenicity

Not available.

### Reproductive toxicity

Not available.

### Teratogenicity

Not available.

### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
2-diethylaminoethanol	Category 3	Not applicable.	Respiratory tract irritation
ethanediol	Category 2 Category 3	Oral Not applicable.	kidneys Narcotic effects

### Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
GREENchoice Cove Base Adhesive	Category 2	Oral	kidneys

### Aspiration hazard

Not available.

- Information on the likely routes of exposure** : Routes of entry anticipated: Oral, Inhalation.  
Routes of entry not anticipated: Dermal.

### Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Harmful if inhaled.
- Skin contact** : Causes skin irritation. May cause an allergic skin reaction.

## Section 11. Toxicological information

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

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

**Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness

**Inhalation** : No specific data.

**Skin contact** : Adverse symptoms may include the following:  
irritation  
redness

**Ingestion** : No specific data.

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

#### Short term exposure

**Potential immediate effects** : Not available.

**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 if swallowed. 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

Not available.

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
2-diethylaminoethanol  ethanediol	Acute EC50 83.6 mg/l	Crustaceans	48 hours
	Acute LC50 147 mg/l	Fish - Leuciscus idus	96 hours
	Chronic NOEC 5 mg/l	Algae - Scenedesmus subspicatus	-
	Acute EC50 10940 mg/l	Algae - Selenastrum capriocornutum	96 hours
	Acute LC50 6900000 µg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
Acute LC50 41000000 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours	
Acute LC50 8050000 µg/l Fresh water	Fish - Pimephales promelas	96 hours	
Chronic NOEC 10000 mg/l	Algae - Selenastrum capriocornutum	96 hours	



## Section 12. Ecological information

### Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
2-diethylaminoethanol ethanediol	- -	- -	Readily Readily

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
2-diethylaminoethanol ethanediol	0.21 -1.36	<6.1 10	low 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. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	ADR/RID	IMDG	IATA
<b>UN number</b>	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
<b>UN proper shipping name</b>	-	-	-	-	-	-
<b>Transport hazard class(es)</b>	-	-	-	-	-	-
<b>Packing group</b>	-	-	-	-	-	-
<b>Environmental hazards</b>	No.	No.	No.	No.	No.	No.

**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 14. Transport information

## Section 15. Regulatory information

### U.S. Federal regulations

#### SARA 302/304

##### Composition/information on ingredients

No products were found.

**SARA 304 RQ** : Not applicable.

#### SARA 311/312

**Classification** : ACUTE TOXICITY (inhalation) - Category 4  
 SKIN IRRITATION - Category 2  
 EYE IRRITATION - Category 2A  
 SKIN SENSITIZATION - Category 1B  
 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (kidneys) (oral) - Category 2

##### Composition/information on ingredients

Name	%	Classification
2-diethylaminoethanol	≤3	FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 3 SKIN CORROSION - Category 1 SERIOUS EYE DAMAGE - Category 1 SKIN SENSITIZATION - Category 1B SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
ethanediol	≤1	ACUTE TOXICITY (oral) - Category 4 TOXIC TO REPRODUCTION (Fertility) - Category 2 TOXIC TO REPRODUCTION (Unborn child) - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (kidneys) (oral) - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3

### State regulations

**Massachusetts** : The following components are listed: N,N-DIETHYLETHANOLAMINE; DIETHYLAMINO ETHANOL

**New York** : None of the components are listed.

**New Jersey** : The following components are listed: DIETHYLAMINOETHANOL; ETHANOL, 2-(DIETHYLAMINO)-

**Pennsylvania** : The following components are listed: ETHANOL, 2-(DIETHYLAMINO)-

#### California Prop. 65

**⚠ WARNING:** This product can expose you to Ethylene Glycol, 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](http://www.P65Warnings.ca.gov).

Ingredient name	No significant risk level	Maximum acceptable dosage level
Ethylene Glycol	-	Yes.

## Section 15. Regulatory information

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol (Annexes A, B, C, E)

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

#### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

#### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### Inventory list

**China** : Not determined.

**United States TSCA 8(b) inventory** : All components are listed or exempted.

## Section 16. Other information

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

Health	*	2
Flammability		0
Physical hazards		0

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

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

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



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

### Procedure used to derive the classification

## Section 16. Other information

Classification	Justification
ACUTE TOXICITY (inhalation) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SKIN SENSITIZATION - Category 1B SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (kidneys) (oral) - Category 2	Expert judgment Expert judgment Expert judgment Expert judgment Expert judgment

### History

**Date of printing** : 2/5/2019

**Date of issue/Date of revision** : 2/5/2019

**Date of previous issue** : 8/6/2018

**Version** : 1.02

**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

**References** : Not available.

✔ Indicates information that has changed from previously issued version.

### 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.