SAFETY DATA SHEET

BromiCide® Granules

Section 1. Identification

GHS product identifier	:	BromiCide® Granules
Product code	:	421224, 421225
Chemical name	:	Biocide
Other means of identification	:	BromiCide® Granules
Product type	:	solid

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

Identified uses
Biocide

Uses advised against
Not applicable.

Supplier's details	:	BWA Water Additives US LLC A Company of Italmatch Chemicals Group 5544 Oakdale Road SE Smyrna USA GA 30082 404-696-6711 Monday - Friday (9.00 - 17.00) /
Emergency telephone number (with hours of operation)	:	Not available.

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	:	OXIDIZING SOLIDS - Category 3 ACUTE TOXICITY (oral) - Category 4 SKIN CORROSION - Category 1C SERIOUS EYE DAMAGE - Category 1 SKIN SENSITIZATION - Category 1 AQUATIC HAZARD (ACUTE) - Category 1

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : May intensify fire; oxidizer.
Harmful if swallowed.
Causes severe skin burns and eye damage.
May cause an allergic skin reaction.
Very toxic to aquatic life.

Precautionary statements

General : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention : Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe dust/fume/gas/mist/vapors/spray. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Response : IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water [or shower]. 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 doctor/physician.

Storage : Store locked up.

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 : Mono-constituent substance

Chemical name : Biocide

Other means of identification : BromiCide® Granules

CAS number/other identifiers

CAS number : 16079-88-2

Ingredient name	%	CAS number
2,4-Imidazolidinedione, 1-bromo-3-chloro-5,5-dimethyl-	96	16079-88-2

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

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label: DANGER Avoid contact with eyes, skin and clothing. EPA Registration Number: 83451-3

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified 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 : 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 15 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. 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 : Get medical attention immediately. Call a poison center or physician. 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 15 minutes. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. 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	:	No known significant effects or critical hazards.
Skin contact	:	Causes severe burns. May cause an allergic skin reaction.
Ingestion	:	Harmful if swallowed.

Over-exposure signs/symptoms

Eye contact	:	Adverse symptoms may include the following: pain, watering, redness
Inhalation	:	No specific data. Adverse symptoms may include the following:, respiratory tract irritation
Skin contact	:	Causes severe burns. Adverse symptoms may include the following:, pain or irritation, redness, blistering may occur
Ingestion	:	May cause burns to mouth, throat and stomach. Adverse symptoms may include the following:, stomach pains

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 alcohol-resistant foam or water spray or fog.
Unsuitable extinguishing media	:	Carbon dioxide (CO_2). Dry chemical.
Specific hazards arising from the chemical	:	Oxidizing material. May intensify fire. This material is very toxic to aquatic life. 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, nitrogen oxides, halogenated compounds

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.
Remark	:	Not applicable.

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. 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

Small spill	:	Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Avoid dust generation. Using a vacuum with HEPA filter will reduce dust dispersal. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
Large spill	:	Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. 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. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from clothing, incompatible materials and combustible materials. Keep away from heat. 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	:	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. Store locked up. Separate from reducing agents and combustible 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. Protect from moisture. Separate from acids. Avoid creating dusty conditions and prevent wind dispersal.
Storage temperature	:	Do not store above the following temperature: 50 °C

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

None.

Appropriate engineering controls	:	If user operations generate dust, fumes, gas, vapor or mist, 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 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.

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 and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state : solid [GRANULES.]

Color : White. / Off-white.

Odor : Slight

Odor threshold : Not available.

pH	:	3.5 [Conc. (% w/w): 1.5 g/l]
Melting point/freezing point	:	145 - 160 °C (293 - 320 °F)
Boiling point, initial boiling point, and boiling range	:	Not available.
Flash point	:	Not available.
Evaporation rate	:	Not available.
Flammability	:	Not available.
Lower and upper explosion limit/flammability limit	:	**Lower:** Not available. **Upper:** Not available.
Vapor pressure	:	Not available.
Relative vapor density	:	Not available.
Relative density	:	0.96 @ 23 °C (73 °F) 0.9
Solubility	:	Partially soluble in the following materials: water
Solubility in water	:	Partially soluble in the following materials: water
Partition coefficient: n-octanol/water	:	0.35
Auto-ignition temperature	:	Not available.
Decomposition temperature	:	Not available.
Viscosity	:	**Dynamic :** Not available. **Kinematic :** Not available.
Flow time (ISO 2431)	:	Not available.

Particle characteristics

Median particle size	:	Not available.

Section 10. Stability and reactivity

Reactivity	:	Oxidizing material. Contact with acids liberates toxic gas.
Chemical stability	:	Stable under recommended storage and handling conditions (see Section 7). Decomposes in water. Protect from moisture.
Possibility of hazardous reactions	:	Hazardous reactions or instability may occur under certain conditions of storage or use. Conditions may include the following: contact with combustible materials Reactions may include the following: risk of causing or intensifying fire
Conditions to avoid	:	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Incompatible materials : Reactive or incompatible with the following materials: combustible materials, reducing materials, strong acids

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced., In a fire, decomposition may produce toxic gases/fumes., Decomposition products may include the following materials:, carbon monoxide, carbon dioxide, oxides of nitrogen, HBr, Hydrogen chloride (HCl).

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
BromiCide® Granules				
	LD50 Oral	Rat	578 mg/kg	-
	LD50 Dermal	Rat	2,000 mg/kg	-

Conclusion/Summary : Harmful if swallowed.

Irritation/Corrosion

Conclusion/Summary
Skin : Corrosive to the skin.
Eyes : Causes serious eye damage.
Respiratory : No known significant effects or critical hazards.

Sensitization

Product/ingredient name	Route of exposure	Species	Result
BromiCide® Granules	Skin	Guinea pig	Sensitizing Guinea pig maximisation test (GPMT)

Conclusion/Summary
Skin : May cause an allergic skin reaction.
Respiratory : No known significant effects or critical hazards.

Mutagenicity

Conclusion/Summary : Not mutagenic in Ames test.

Carcinogenicity

Conclusion/Summary : No known significant effects or critical hazards.

Reproductive toxicity

Conclusion/Summary : No known significant effects or critical hazards.

Teratogenicity

Conclusion/Summary	:	No known significant effects or critical hazards.

Specific target organ toxicity (single exposure)

Not available.

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	:	No known significant effects or critical hazards.
Skin contact	:	Causes severe burns. May cause an allergic skin reaction.
Ingestion	:	Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	:	Adverse symptoms may include the following: pain, watering, redness
Inhalation	:	No specific data. Adverse symptoms may include the following:, respiratory tract irritation
Skin contact	:	Causes severe burns. Adverse symptoms may include the following:, pain or irritation, redness, blistering may occur
Ingestion	:	May cause burns to mouth, throat and stomach. Adverse symptoms may include the following:, stomach pains

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

Conclusion/Summary	:	No known significant effects or critical hazards.
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.
Reproductive toxicity : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral	Dermal	Inhalation (gases)	Inhalation (vapors)	Inhalation (dusts and mists)
BromiCide® Granules	520.83 mg/kg	N/A	N/A	N/A	N/A

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
BromiCide® Granules			
	Acute LC50 0.87 mg/l	Rainbow trout,donaldson trout	96 h
	Acute EC50 0.46 mg/l	Water flea	48 h
	Acute LC50 > 640 mg/l	Mollusc	96 h
Remarks - Acute - Aquatic invertebrates.:	Very toxic to aquatic life.		

Conclusion/Summary : Very toxic to aquatic life.

Persistence and degradability

Conclusion/Summary : Not available.

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
BromiCide® Granules	0.35	-	low

Mobility in soil

Soil/water partition coefficient (KOC) : 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. 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. This material and its container must be disposed of as hazardous waste

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IMDG	IATA
UN number	UN3085	UN3085	UN3085	UN3085	UN3085
UN proper shipping name	OXIDIZING SOLID, CORROSIVE, N.O.S. (bromochloro-5,5-dimethylimidazolidine-2,4-dione)	OXIDIZING SOLID, CORROSIVE, N.O.S. (bromochloro-5,5-dimethylimidazolidine-2,4-dione)	OXIDIZING SOLID, CORROSIVE, N.O.S. (bromochloro-5,5-dimethylimidazolidine-2,4-dione)	OXIDIZING SOLID, CORROSIVE, N.O.S. (bromochloro-5,5-dimethylimidazolidine-2,4-dione)	OXIDIZING SOLID, CORROSIVE, N.O.S. (bromochloro-5,5-dimethylimidazolidine-2,4-dione)
Transport hazard class(es)	5.1 (8) 	5.1 (8) 	5.1 (8) 	5.1 (8) 	5.1 (8) 
Packing group	III	III	III	III	III
Environmental hazards	Yes.	Yes.	Yes.	Yes.	Yes.

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 IMO instruments : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **United States - TSCA 5(a)2 - Final significant new use rules:** bromochloro-5,5-dimethylimidazolidine-2,4-dione;
TSCA 8(a) CDR Exempt/Partial exemption: Not determined

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) : Not 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

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : OXIDIZING SOLIDS - Category 3
ACUTE TOXICITY - oral - Category 4
SKIN CORROSION - Category 1B
SERIOUS EYE DAMAGE - Category 1
SKIN SENSITIZATION - Category 1

Composition/information on ingredients

Name	%	Classification
2,4-Imidazolidinedione, 1-bromo-3-chloro-5,5-dimethyl-	96	OXIDIZING SOLIDS - Category 3 ACUTE TOXICITY - Category 4 - oral SKIN CORROSION - Category 1B SERIOUS EYE DAMAGE - Category 1 SKIN SENSITIZATION - Category 1

State regulations

Massachusetts : None of the components are listed.

New York : None of the components are listed.

New Jersey	:	None of the components are listed.
Pennsylvania	:	None of the components are listed.

California Prop. 65

This product does not require a Safe Harbor warning under California Prop. 65.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Chemical Weapons Convention List Schedule I Chemicals
None of the components are listed.

Chemical Weapons Convention List Schedule II Chemicals
None of the components are listed.

Chemical Weapons Convention List Schedule III Chemicals
None of the components are listed.

Montreal Protocol
None of the components are listed.

Stockholm Convention on Persistent Organic Pollutants

Annex A - Elimination - Production
None of the components are listed.

Annex A - Elimination - Use
None of the components are listed.

Annex B - Restriction - Production
None of the components are listed.

Annex B - Restriction - Use
None of the components are listed.

Annex C - Unintentional - Production
None of the components are listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Rotterdam Convention on Prior Informed Consent (PIC) - Industrial
None of the components are listed.

Rotterdam Convention on Prior Informed Consent (PIC) - Pesticide
None of the components are listed.

Rotterdam Convention on Prior Informed Consent (PIC) -Severely hazardous pesticide
None of the components are listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Heavy metals - Annex 1
None of the components are listed.

POPs - Annex 1 - Production
None of the components are listed.

POPs - Annex 1 - Use
None of the components are listed.

POPs - Annex 2
None of the components are listed.

POPs - Annex 3
None of the components are listed.

Inventory list

Australia	:	All components are listed or exempted.
Canada	:	All components are listed or exempted.
China	:	All components are listed or exempted.
Europe	:	All components are listed or exempted.
Japan	:	**Japan inventory (CSCL)**: All components are listed or exempted. **Japan inventory (ISHL)**: All components are listed or exempted.
New Zealand	:	All components are listed or exempted.
Philippines	:	All components are listed or exempted.
Republic of Korea	:	All components are listed or exempted.
Taiwan	:	All components are listed or exempted.
Thailand	:	Not determined.
Turkey	:	All components are listed or exempted.
United States	:	All components are listed or exempted.
Viet Nam	:	All components are listed or exempted.

Section 16. Other information

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

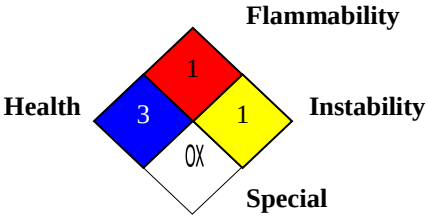
Health	/	3
Flammability		0
Physical hazards		1

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.)



Procedure used to derive the classification

Classification	Justification
OXIDIZING SOLIDS - Category 3	Expert judgment
ACUTE TOXICITY (oral) - Category 4	Expert judgment
SKIN CORROSION - Category 1C	Expert judgment
SERIOUS EYE DAMAGE - Category 1	Expert judgment
SKIN SENSITIZATION - Category 1	Expert judgment
AQUATIC HAZARD (ACUTE) - Category 1	Expert judgment

History

Date of printing : 06/22/2022
Date of issue/Date of revision : 06/22/2022
Date of previous issue : 05/23/2022
Version : 1.6
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)
N/A = Not available
SGG = Segregation Group
UN = United Nations
References : Not available.

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.