# **SAFETY DATA SHEET**

IN DIVIDUAL

## Heavy Duty Hard Water Machine Rinse Aid

**Section 1. Identification** 

GHS product identifier	: Heavy Duty Hard Water Machine	Rinse Aid	
Product code	: 243 BRI		
Other means of identification	: Not available.		
Product type	: Liquid.		
Relevant identified uses of t	the substance or mixture and uses a	dvised against	
Identified uses			
Rinse Aid			
Uses advised against		Reason	
For Industrial and Institutional	I Use Only	-	
Supplier's details	: BradyIFS 7055 Lindell Rd Las Vegas, NV 89118 800-293-4698		
Emergency telephone number (with hours of operation)	: Chemtrec (800) 424-9300 24	hour	
Section 2. Hazard	s identification		
OSHA/HCS status	: This material is considered hazar (29 CFR 1910.1200).	dous by the OSHA Hazard (	Communication Standard
Classification of the substance or mixture	: SKIN CORROSION - Category 1 SERIOUS EYE DAMAGE - Category		
GHS label elements Hazard pictograms			
Signal word	: Danger		
Hazard statements	: Causes severe skin burns and ey	e damage.	
Precautionary statements			
Prevention	: Wear protective gloves. Wear ey Wear protective clothing. Wash		
Response	: IF INHALED: Remove person to Immediately call a POISON CEN a POISON CENTER or physician SKIN (or hair): Take off immedia shower. Wash contaminated clo CENTER or physician. IF IN EYE Remove contact lenses, if preser POISON CENTER or physician.	TER or physician. IF SWAL Rinse mouth. Do NOT ind tely all contaminated clothin hing before reuse. Immedia S: Rinse cautiously with wa	LOWED: Immediately call duce vomiting. IF ON g. Rinse skin with water or ately call a POISON ater for several minutes.
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## Section 2. Hazards identification

#### Storage Disposal

- : Store locked up.
- : 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
Other means of	: Not available.
identification	

Ingredient name	%	CAS number
9.9 · · · · · · · · · · · · · · · · · ·	≥10 - ≤25	79-14-1
Isopropyl alcohol	≤5	67-63-0
2-Propenoic acid, homopolymer, sodium salt	≤3	9003-04-7

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	: 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

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## Section 4. First aid measures

Potential acute health effe	
Eye contact	: Causes serious eye damage.
Inhalation	: No known significant effects or critical hazards.
Skin contact	: Causes severe burns.
Ingestion	: No known significant effects or critical hazards.
Over-exposure signs/sym	<u>otoms</u>
Eye contact	: Adverse symptoms may include the following: pain watering redness
Inhalation	: No specific data.
Skin contact	: Adverse symptoms may include the following: pain or irritation redness blistering may occur
Ingestion	: Adverse symptoms may include the following: stomach pains
Indication of immediate me	lical attention and special treatment needed, if necessary
Notes to physician	<ul> <li>Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.</li> </ul>
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 sulfur oxides metal oxide/oxides
Special protective actions for fire-fighters	<ul> <li>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.</li> </ul>
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.

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## Section 6. Accidental release measures

#### Personal precautions, protective equipment and emergency procedures

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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. 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 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 co	ont	ainment 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). Do not get in eves or on skin or clothing. Do not breathe vapor or mist. 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. Empty containers retain product residue and can be hazardous. Do not reuse container. Advice on general : 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, occupational hygiene 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**, : 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 including any (see Section 10) and food and drink. Store locked up. Keep container tightly closed incompatibilities 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		
glycollic acid Isopropyl alcohol	None. ACGIH TLV (United States, 3/2017). TWA: 200 ppm 8 hours. STEL: 400 ppm 15 minutes. OSHA PEL 1989 (United States, 3/1989). TWA: 400 ppm 8 hours. TWA: 980 mg/m <sup>3</sup> 8 hours. STEL: 500 ppm 15 minutes. STEL: 1225 mg/m <sup>3</sup> 15 minutes. NIOSH REL (United States, 10/2016). TWA: 400 ppm 10 hours.		
	TWA: 980 mg/m <sup>3</sup> 10 hours. STEL: 500 ppm 15 minutes. STEL: 1225 mg/m <sup>3</sup> 15 minutes. <b>OSHA PEL (United States, 6/2016).</b> TWA: 400 ppm 8 hours. TWA: 980 mg/m <sup>3</sup> 8 hours.		
2-Propenoic acid, homopolymer, sodium salt	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. 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. Recommended: 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.
<b>F</b>	

## Section 8. Exposure controls/personal protection

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Other skin protection	<ul> <li>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.</li> </ul>
Respiratory protection	<ul> <li>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.</li> </ul>
Personal protective equipment (Pictograms)	

# Section 9. Physical and chemical properties

<u>Appearance</u>	
Physical state	: Liquid.
Color	: Blue.
Odor	: Alcohol-like.
Odor threshold	: Not available.
рН	: 2 to 3
Melting point	: Not available.
Boiling point	: Not available.
Flash point	: Closed cup: >100°C (>212°F)
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.
Relative density	: 1.0943
Solubility	: Easily soluble in the following materials: cold water and hot water.
Solubility in water	: Not available.
Partition coefficient: n- octanol/water	: Not available.
Auto-ignition temperature	: Not available.
Decomposition temperature	: Not available.
Viscosity	: Not available.
Flow time (ISO 2431)	: Not available.

## Section 10. Stability and reactivity

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Conditions to avoid	: No speci	fic data.			
Possibility of hazardous reactions	: Under no	rmal conditions of storage a	and use, hazardous react	ions will not occur.	
Chemical stability	: The prod	uct is stable.			
Reactivity	: No speci	fic test data related to react	ivity available for this proc	duct or its ingredien	nts.

## Section 10. Stability and reactivity

#### Incompatible materials : Not available.

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

## Section 11. Toxicological information

#### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
glycollic acid	LC50 Inhalation Dusts and mists LD50 Oral	Rat Rat	3600 mg/m <sup>3</sup>	4 hours
Isopropyl alcohol	LD50 Oral LD50 Dermal LD50 Oral	Rabbit Rat	1938 mg/kg 12800 mg/kg 5000 mg/kg	-
2-Propenoic acid, homopolymer, sodium salt	LD50 Oral	Rat	>8250 mg/kg	-

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
glycollic acid	Eyes - Severe irritant	Rabbit	-	2 milligrams	-
	Skin - Severe irritant	Rabbit	-	0.5 Mililiters	-
Isopropyl alcohol	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	10 milligrams	-
	Eyes - Severe irritant	Rabbit	-	100 milligrams	-
	Skin - Mild irritant	Rabbit	-	500 milligrams	-
2-Propenoic acid, homopolymer, sodium salt	Eyes - Moderate irritant	Rabbit	-	2 milligrams	-

#### **Sensitization**

Not available.

#### **Mutagenicity**

Not available.

#### **Carcinogenicity**

Not available.

#### **Classification**

Product/ingredient name	OSHA	IARC	NTP
Isopropyl alcohol	-	3	-

#### Reproductive toxicity

Not available.

#### Teratogenicity

Not available.

#### Specific target organ toxicity (single exposure)

Name			Category	Route of exposure	Target organs	
Isopropyl alcohol			Category 3	Not applicable.	Narcotic effects	
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## Section 11. Toxicological information

## Specific target organ toxicity (repeated exposure)

Not available.

#### Aspiration hazard

Not available.

Information on the likely routes of exposure	:	Routes of entry anticipated: Oral, Dermal. Routes of entry not anticipated: Inhalation.
Potential acute health effects	<u>s</u>	
Eye contact	1	Causes serious eye damage.
Inhalation	1	No known significant effects or critical hazards.
Skin contact	1	Causes severe burns.
Ingestion	1	No known significant effects or critical hazards.
		al, chemical and toxicological characteristics
Eye contact		Adverse symptoms may include the following: pain watering redness
Inhalation		No specific data.
Skin contact	:	Adverse symptoms may include the following: pain or irritation redness blistering may occur
Ingestion	:	Adverse symptoms may include the following: stomach pains
Delayed and immediate effect	<u>:ts</u>	and also chronic effects from short and long term exposure
Delayed and immediate effect	<u>sts</u>	and also chronic effects from short and long term exposure
		and also chronic effects from short and long term exposure Not available.
Short term exposure Potential immediate	:	
Short term exposure Potential immediate effects	:	Not available.
Short term exposure Potential immediate effects Potential delayed effects	:	Not available.
Short term exposure Potential immediate effects Potential delayed effects Long term exposure Potential immediate	:	Not available. Not available.
Short term exposure Potential immediate effects Potential delayed effects Long term exposure Potential immediate effects		Not available. Not available. Not available. Not available.
Short term exposurePotential immediateeffectsPotential delayed effectsLong term exposurePotential immediateeffectsPotential delayed effectsPotential delayed effects		Not available. Not available. Not available. Not available.
Short term exposurePotential immediateeffectsPotential delayed effectsLong term exposurePotential immediateeffectsPotential delayed effectsPotential delayed effectsPotential chronic health effects		Not available. Not available. Not available. Not available.
Short term exposurePotential immediateeffectsPotential delayed effectsLong term exposurePotential immediateeffectsPotential delayed effectsPotential chronic health effectsNot available.		Not available. Not available. Not available. S
Short term exposure         Potential immediate         effects         Potential delayed effects         Long term exposure         Potential immediate         effects         Potential delayed effects         Potential delayed effects         Potential delayed effects         Potential delayed effects         Potential chronic health effects         Not available.         General		Not available. Not available. Not available. Not available. S No known significant effects or critical hazards.
Short term exposure         Potential immediate         effects         Potential delayed effects         Long term exposure         Potential immediate         effects         Potential delayed effects         Potential delayed effects         Potential delayed effects         Potential chronic health effects         Not available.         General         Carcinogenicity		Not available. Not available. Not available. Not available. S No known significant effects or critical hazards. No known significant effects or critical hazards.
Short term exposure         Potential immediate         effects         Potential delayed effects         Long term exposure         Potential immediate         effects         Potential delayed effects         Potential delayed effects         Potential delayed effects         Potential chronic health effects         Not available.         General         Carcinogenicity         Mutagenicity		Not available. Not available. Not available. Not available. Not available. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Short term exposure         Potential immediate         effects         Potential delayed effects         Long term exposure         Potential immediate         effects         Potential delayed effects         Potential delayed effects         Potential delayed effects         Potential chronic health effects         Not available.         General         Carcinogenicity         Mutagenicity         Teratogenicity		Not available. Not available. Not available. Not available. Not available. No known significant effects or critical hazards. No known significant effects or critical hazards.

## Numerical measures of toxicity Acute toxicity estimates

## Section 11. Toxicological information

Route	ATE value	
Oral Inhalation (dusts and mists)	18724.64 mg/kg 34.78 mg/l	

## Section 12. Ecological information

# ToxicityProduct/ingredient nameResultSpeciesExposureIsopropyl alcoholAcute EC50 10100 mg/l Fresh water<br/>Acute LC50 1400000 µg/l Marine water<br/>Acute LC50 4200 mg/l Fresh waterDaphnia - Daphnia magna<br/>Crustaceans - Crangon crangon<br/>Fish - Rasbora heteromorpha48 hours<br/>48 hours<br/>96 hours

## Persistence and degradability

Not available.

## **Bioaccumulative potential**

Product/ingredient name	LogPow	BCF	Potential
glycollic acid	<0.3	-	low
Isopropyl alcohol	0.05		low

#### Mobility in soil

Soil/water partition	: Not available.
coefficient (Koc)	

: No known significant effects or critical hazards.

## Section 13. Disposal considerations

Other adverse effects

: 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

## Section 14 Transport information

	DOT Classification	TDG Classification	Mexico Classification	ADR/RID	IMDG	IATA
UN number	UN3265	UN3265	UN3265	UN3265	UN3265	UN3265
UN proper shipping name	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S (Glycolic Acid)					
Transport hazard class(es)	8	8	8	8	8	8
Packing group	Ш	Ш	Ш	111	111	111
Environmental hazards	No.	No.	No.	No.	No.	No.

#### Additional information

**TDG Classification** 

: Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.40-2.42 (Class 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.

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

## Section 15. Regulatory information

U.S. Federal regulations	•	a) CDR Exempt/Partial exe ater Act (CWA) 307: chrom	-	I		
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 ingredient	<u>s</u>				
No products were found.						
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## Section 15. Regulatory information

## SARA 304 RQ

: Not applicable.

<u>SARA 311/312</u>

Classification

: SKIN CORROSION - Category 1B SERIOUS EYE DAMAGE - Category 1

## Composition/information on ingredients

Name	%	Classification
glycollic acid		ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SKIN CORROSION - Category 1B SERIOUS EYE DAMAGE - Category 1
Isopropyl alcohol		FLAMMABLE LIQUIDS - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
2-Propenoic acid, homopolymer, sodium salt		ÈYE IRRITATION - Category 2A

#### State regulations

**Massachusetts** 

: The following components are listed: ISOPROPYL ALCOHOL; 2-PROPANOL

**New York** 

- : None of the components are listed.
- New Jersey
- : The following components are listed: ISOPROPYL ALCOHOL; 2-PROPANOL
- Pennsylvania
- : The following components are listed: Isopropanol

## 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

Not listed.

## **Montreal Protocol**

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

Australia	: All components are listed or exempted.
Canada	: At least one component is not listed in DSL but all such components are listed in NDSL.
China	: All components are listed or exempted.
Europe	: At least one component is not listed.
Japan	: Japan inventory (ENCS): Not determined. Japan inventory (ISHL): Not determined.
Malaysia	: Not determined
New Zealand	: All components are listed or exempted.
Philippines	: All components are listed or exempted.
Republic of Korea	: All components are listed or exempted.

## Section 15. Regulatory information

Taiwan	4	All components are listed or exempted.
Thailand	1	Not determined.
Turkey	1	Not determined.
United States	1	All components are listed or exempted.
Viet Nam	1	Not determined.

## Section 16. Other information

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



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

Classification	Justification
	Calculation method Calculation method

<u>History</u>	
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## Section 16. Other information

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)
References	UN = United Nations Not available.

**V** 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.