### SAFETY DATA SHEET



#### **Chlorinated Machine Detergent**

### **Section 1. Identification**

GHS product identifier

: Chlorinated Machine Detergent

**Product code** 

: 241

Other means of

identification

: Not available.

**Product type** 

: Liquid.

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

Identified uses	
Machine Dishwashing Detergent	
Uses advised against	Reason

Supplier's details

: Betco Corporation 400 Van Camp Road Bowling Green, Ohio 43402 www.betco.com

888-462-3826

Emergency telephone number (with hours of operation) : Chemtrec (800) 424-9300 24 hour

### 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

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

**GHS label elements** 

Hazard pictograms



Signal word

: Danger

**Hazard statements** 

: Causes severe skin burns and eye damage.

**Precautionary statements** 

**Prevention** 

: Wear protective gloves. Wear eye or face protection: Recommended: splash goggles. Wear protective clothing. Wash hands thoroughly after handling.

Response

: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician. IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.

Storage

: Store locked up.

**Disposal** 

: Dispose of contents and container in accordance with all local, regional, national and international regulations.

Date of issue/Date of revision: 8/3/2020Date of previous issue: No previous validationVersion: 1

### Section 2. Hazards identification

Hazards not otherwise classified

: None known.

#### Classified

### Section 3. Composition/information on ingredients

Substance/mixture
Other means of
identification

: Mixture : Not available.

Ingredient name	%	CAS number
sodium hydroxide sodium hypochlorite, solution	≥10 - ≤25 ≤3	1310-73-2 7681-52-9

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

#### Potential acute health effects

**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/symptoms

Date of issue/Date of revision : 8/3/2020 Date of previous issue : No previous validation Version : 1 2/12

#### Section 4. First aid measures

: Adverse symptoms may include the following: **Eye contact** 

> 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 medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large

quantities have been ingested or inhaled.

**Specific treatments** : No specific treatment.

**Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is

suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water

before removing it, or wear gloves.

#### See toxicological information (Section 11)

### Section 5. Fire-fighting measures

#### **Extinguishing media**

Suitable extinguishing

media

**Unsuitable extinguishing** 

media

: Use an extinguishing agent suitable for the surrounding fire.

: None known.

Specific hazards arising from the chemical

**Hazardous thermal** decomposition products : In a fire or if heated, a pressure increase will occur and the container may burst.

: Decomposition products may include the following materials: 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. 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".

Date of issue/Date of revision : 8/3/2020 Date of previous issue : No previous validation Version :1

### Section 6. Accidental release measures

#### **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). Do not get in eyes 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. Keep away from acids. 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.

### including any incompatibilities

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 (see Section 10) and food and drink. Store locked up. Separate from acids. 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
sodium hydroxide	ACGIH TLV (United States, 3/2017).
	C: 2 mg/m³
	OSHA PEL 1989 (United States, 3/1989).
	CEIL: 2 mg/m <sup>3</sup>
	NIOSH REL (United States, 10/2016).
	CEIL: 2 mg/m³
	OSHA PEL (United States, 6/2016).
	TWA: 2 mg/m³ 8 hours.
sodium hypochlorite, solution	AIHA WEEL (United States, 7/2018).
	STEL: 2 mg/m³ 15 minutes.

Date of issue/Date of revision : 8/3/2020 Date of previous issue : No previous validation Version :1

### Section 8. Exposure controls/personal protection

# 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.

#### 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.

# Personal protective equipment (Pictograms)



### Section 9. Physical and chemical properties

#### **Appearance**

Physical state : Liquid.

Color : Yellow. Clear. [Light]

Odor : Characteristic.
Odor threshold : Not available.
pH : 13 to 13.9
Melting point : Not available.
Boiling point : Not available.

Flash point : Closed cup: Not applicable. [Product does not sustain combustion.]

Evaporation rate : Not available.
Flammability (solid, gas) : Not available.

Date of issue/Date of revision : 8/3/2020 Date of previous issue : No previous validation Version : 1 5/12

### Section 9. Physical and chemical properties

Lower and upper explosive

(flammable) limits

: Not available.

Vapor pressure : Not available.
Vapor density : Not available.
Relative density : 1.1808

**Solubility** : Easily soluble in the following materials: cold water and hot water.

Solubility in water : Not available.

Partition coefficient: n- : Not available.

octanol/water

Auto-ignition temperature: Not available.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**: Not available.

**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**

Not available.

#### **Irritation/Corrosion**

Product/ingredient name	Result	Species	Score	Exposure	Observation
sodium hydroxide	Eyes - Severe irritant	Monkey	-	24 hours 1 Percent	-
	Eyes - Mild irritant	Rabbit	-	400 Micrograms	-
	Eyes - Severe irritant	Rabbit	-	24 hours 50 Micrograms	-
	Eyes - Severe irritant	Rabbit	-	1 Percent	-
	Eyes - Severe irritant	Rabbit	-	0.5 minutes 1 milligrams	-
	Skin - Mild irritant	Human	-	24 hours 2 Percent	-
	Skin - Severe irritant	Rabbit	-	24 hours 500 milligrams	-
sodium hypochlorite, solution	Eyes - Mild irritant	Rabbit	-	1.31 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	10 milligrams	-

#### **Sensitization**

Date of issue/Date of revision : 8/3/2020 Date of previous issue : No previous validation Version : 1 6/12

### Section 11. Toxicological information

Not available.

#### **Mutagenicity**

Not available.

#### **Carcinogenicity**

Not available.

#### Classification

Product/ingredient name	OSHA	IARC	NTP
sodium hypochlorite, solution	-	3	-

#### **Reproductive toxicity**

Not available.

#### **Teratogenicity**

Not available.

#### 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

: Routes of entry anticipated: Oral, Dermal, Inhalation.

#### Potential acute health effects

**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.

#### Symptoms related to the physical, 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 effects and also chronic effects from short and long term exposure

**Short term exposure** 

Potential immediate

: Not available.

effects

Potential delayed effects : Not available.

Long term exposure

Potential immediate :

effects

: Not available.

Date of issue/Date of revision : 8/3/2020 Date of previous issue : No previous validation Version : 1 7/12

### Section 11. Toxicological information

Potential delayed effects : Not available.

#### Potential chronic health effects

Not available.

General : No known significant effects or critical hazards.
 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
sodium hydroxide	Acute EC50 40.38 mg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
	Acute LC50 125 ppm Fresh water	Fish - Gambusia affinis - Adult	96 hours
sodium hypochlorite, solution	Acute EC50 0.67 mg/l Marine water	Algae - Phaeodactylum tricornutum - Exponential growth phase	96 hours
	Acute LC50 56400 μg/l Marine water	Crustaceans - Palaemonetes	48 hours
	Acute LC50 32 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 32 μg/l Marine water	Fish - Oncorhynchus kisutch - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
	Chronic NOEC 0.5 mg/l Marine water	Algae - Isochrysis galbana - Exponential growth phase	96 hours
	Chronic NOEC 0.1 ppm Fresh water	Fish - Cyprinus carpio - Young	30 days

#### Persistence and degradability

Not available.

#### **Bioaccumulative potential**

Not available.

**Mobility in soil** 

Soil/water partition coefficient (Koc)

: Not available.

Other adverse effects : No known significant effects or critical hazards.

Date of issue/Date of revision : 8/3/2020 Date of previous issue : No previous validation Version : 1 8/12

### 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
UN number	UN1760	UN1760	UN1760	UN1760	UN1760	UN1760
UN proper shipping name	Corrosive liquid, n.o.s. (sodium hydroxide, sodium hypochlorite, solution)	Corrosive liquid, n.o.s. (sodium hydroxide, sodium hypochlorite, solution)	Corrosive liquid, n.o.s. (sodium hydroxide, sodium hypochlorite, solution)	Corrosive liquid, n.o.s. (sodium hydroxide, sodium hypochlorite, solution)	Corrosive liquid, n.o.s. (sodium hydroxide, sodium hypochlorite, solution)	Corrosive liquid, n.o.s. (sodium hydroxide, sodium hypochlorite, solution)
Transport hazard class(es)	8	8	8	8	8	8
Packing group	II	II	II	II	II	II
Environmental hazards	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.	No.	Yes.	Yes. The environmentally hazardous substance mark is not required.

# Additional information DOT Classification

: This product is not regulated as a marine pollutant when transported on inland waterways in sizes of ≤5 L or ≤5 kg or by road, rail, or inland air in non-bulk sizes, provided the packagings meet the general provisions of §§ 173.24 and 173.24a.

Reportable quantity 4705.9 lbs / 2136.5 kg [477.98 gal / 1809.3 L]. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.

**TDG Classification** 

: Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.40-2.42 (Class 8), 2.7 (Marine pollutant mark). The marine pollutant mark is not required when transported by road or rail.

ADR/RID IMDG : Tunnel code (E)

IATA

- : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.
- : The environmentally hazardous substance mark may appear if required by other transportation regulations.

Date of issue/Date of revision : 8/3/2020 Date of previous issue : No previous validation Version : 1 9/12

### **Section 14. Transport information**

Special precautions for user : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL and

: Not available.

the IBC Code

### Section 15. Regulatory information

U.S. Federal regulations : TSCA 8(a) CDR Exempt/Partial exemption: Not determined

Clean Water Act (CWA) 311: sodium hydroxide; sodium hypochlorite, solution

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** 

: Not listed

(Essential Chemicals)

**SARA 302/304** 

#### **Composition/information on ingredients**

No products were found.

**SARA 304 RQ** : Not applicable.

**SARA 311/312** 

Classification : SKIN CORROSION - Category 1

SERIOUS EYE DAMAGE - Category 1

#### **Composition/information on ingredients**

Name	%	Classification
sodium hydroxide		CORROSIVE TO METALS - Category 1 SKIN CORROSION - Category 1A SERIOUS EYE DAMAGE - Category 1
sodium hypochlorite, solution		SKIN CORROSION - Category 1B SERIOUS EYE DAMAGE - Category 1

#### **State regulations**

**Massachusetts** : The following components are listed: SODIUM HYDROXIDE; SODIUM

HYPOCHLORITE; HOUSEHOLD BLEACH

**New York** : The following components are listed: Sodium hydroxide; Sodium hypochlorite

: The following components are listed: SODIUM HYDROXIDE; CAUSTIC SODA; **New Jersey** 

SODIUM HYPOCHLORITE; HYPOCHLOROUS ACID, SODIUM SALT

**Pennsylvania** : The following components are listed: SODIUM HYDROXIDE; HYPOCHLOROUS ACID,

SODIUM SALT

#### 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.

Date of issue/Date of revision : 8/3/2020 Date of previous issue : No previous validation Version: 1 10/12

### Section 15. Regulatory information

#### **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 : At least one component is not listed.

Canada : All components are listed or exempted.

China : All components are listed or exempted.

Europe : All components are listed or exempted.

Japan : Japan inventory (ENCS): At least one component is not listed.

Japan inventory (ISHL): Not determined.

Malaysia : Not determined

New Zealand : Not determined.

Philippines : All components are listed or exempted.

Republic of Korea : At least one component is not listed.

Taiwan : Not determined.
Thailand : Not determined.
Turkey : Not determined.

**United States** : All components are listed or exempted.

Viet Nam : 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.)**



Reprinted with permission from NFPA 704-2001, Identification of the Hazards of Materials for Emergency Response Copyright ©1997, National Fire Protection Association, Quincy, MA 02269. This reprinted material is not the complete and official position of the National Fire Protection Association, on the referenced subject which is represented only by the standard in its entirety.

Date of issue/Date of revision : 8/3/2020 Date of previous issue : No previous validation Version : 1 11/12

### Section 16. Other information

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
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	On basis of test data On basis of test data

#### **History**

Date of printing : 8/3/2020 Date of issue/Date of : 8/3/2020

revision

Date of previous issue : No previous validation

Version : 1

**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.

Date of issue/Date of revision : 8/3/2020 Date of previous issue : No previous validation Version : 1 12/12