#### **SECTION 1- PRODUCT IDENTIFICATION**

**PRODUCT NAME** : KNOCKOUT 1

**SYNONYMS**: Product is a mixture: No synonyms are available.

PRODUCT USE : Mild Oxidizing Material SUPPLIER : HYDRAMASTER CORP.

**SUPPLIER'S ADDRESS**: 11015 47TH AVE. SE, MUKILTEO, WA 98275

(425) 775-7272

EMERGENCY RESPONSE PHONE

**NUMBER** 

PERS: 1-800-633-8253

### **SECTION 2 – HAZARD IDENTIFICATION**

**GHS U.S. CLASSIFICATION** 

ACUTE TOXICITY : H302 Cat 4 Harmful if swallowed.

SKIN IRRITATION : H315 Cat 2 Causes skin irritation.

EYE DAMAGE : H319 Cat 1 Causes serious eye irritation.

LABEL ELEMENTS: GHS – US HAZARD The product is classified and labeled according to the

PICTOGRAMS Globally Harmonized System (GHS).

HAZARD PICTOGRAMS :



SIGNAL WORD : WARNING

**HAZARD STATEMENTS**: H302 Harmful if swallowed.

(GHS-US)

: H315 Causes skin irritation.

H319 Causes serious eye irritation.

**PRECAUTIONARY STATEMENTS**: P101 If medical advice is needed, have product container or label at hand.

(GHS-US)

: P102 Keep out of reach of children.

P103 Read label before use.

P210 Keep away from heat/sparks/open flames/hot surfaces – No smoking.

P221 Take any precaution to avoid mixing with combustibles.

: P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P264 Wash skin and contaminated clothing thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.
P280 Wear suitable protective gloves/protective clothing/eye

protection/face protection.

: P301+ IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel

P312 unwell

: P302+P352 : IF ON SKIN: Wash with plenty of soap and water.

: P305+351+ IF IN EYES: Rinse cautiously with water for several minutes. Remove

P338 contact lenses, if present and easy to do. Continue rinsing.

: P332+P313 If skin irritation occurs: Get medical advice/attention.

P362 Take off contaminated clothing.

: P405 Store locked up.

: P501 Dispose of contents/container in accordance with local /regional /

national / international regulations.

**CLASSIFICATION SYSTEM** : NFPA/HMIS Definitions: 0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme.

NFPA RATINGS (SCALE 0-4) : Health = 2, Fire = 1, Reactivity = 0 HMIS RATINGS (SCALE 0-5) : Health = 2, Fire = 1, Reactivity = 0

### SECTION 3 - COMPOSITON/INFORMATION ON INGREDIENTS

CHEMICAL CHARACTERISTIC : Mixtures

**DESCRIPTION**: Mixture of the substances listed below with nonhazardous additions.

COMPONENT	PERCENT	CAS#	EC#	GHS CLASS
Hydrogen Peroxide	5-10	7722-84-1	231-633-2	Ox Liq Cat 1, Skin Corr Cat 1A
				Acute Tox Oral Cat 4, Acute Tox Inhal Cat 4
Ethylene Glycol Monobutyl Ether	1-5	111-76-2	203-905-0	Acute Oral Tox Cat 4, Eye Irrit Cat 2A,
				Skin Irrit Cat 2
Diethylene Glycol Monobutyl	1-5	112-34-5	203-961-6	Eye Irrit Cat 2B
Ether (DB)				
Acrylate Copolymer, Sodium salt	1-5	Trade Secret	N/A	Not Found
Alcohol Ethoxylate (91-6)		68439-46-3	Not Found	Eye Irrit Cat 2B
Aminotrimethylene Phosphonic	0.1-1	6419-19-8	229-146-5	Metal Corr Cat 1, Eye Irrit Cat 2
Acid				

Irrit. = Irritation, Corr. = Corrosion, Cat. = Category. Ox. = Oxidizing, Liq = Liquid, STOT SE = Specific Target Organ Toxicity Single Exposure, Dam = Damage

### **SECTION 4 - FIRST AID MEASURES**

### **DESCRIPTION OF FIRST AID MEASURES**

GENERAL : Symptoms of poisoning may even occur after several hours; therefore medical

observation for at least 48 hours after the accident. Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice. Show the label where possible. In case of unconsciousness place patient stably in side position for

transportation.

**EYE CONTACT**: Immediately flush eyes with water for at least 15 minutes. Hold eyelids open to

ensure adequate flushing. Remove contact lenses, if present and easy to do so.

Continue rinsing. Immediate call a POISON CENTER or doctor/physician.

**SKIN CONTACT**: Immediately remove contaminated clothing and shoes. Wash affected skin area with

soap and large quantities of running water until no evidence of chemical remains. Delayed skin damage is possible if product is not completely washed off. If irritation ,

pain and or redness persists, get medical attention.

**SWALLOWING (INGESTION)** : If ingested, dilute swallowed material by drinking water. DO NOT INDUCE VOMITING.

If vomiting occurs spontaneously, keep airway clear. Give more water when vomiting stops. If victim is unconscious, loosen tight clothing and lay victim on side. Never give

anything by mouth to an unconscious person. Get immediate medical attention.

**INHALATION** : Remove victim from exposure and into fresh air. If respiratory symptoms persist, get

medical attention.

OTHER INSTRUCTIONS : Rescue personnel must wear appropriate protective equipment during removal of

victims from contaminated areas. Treat symptomatically and supportively. Remove and isolate contaminated clothing and shoes. Contaminated clothing may be a fire

risk.

### **SECTION 5 – FIRE FIGHTING MEASURES**

**EXTINGUISHING MEDIA** : Water spray, fog, carbon dioxide. Carbon dioxide may provide limited control. Dry

chemical or foams are not recommended.

**SPECIAL HAZARDS (FIRE)** : Not flammable. This product is an oxidizer which may intensify a fire.

**EXPLOSION HAZARDS**: Product is not explosive.

REACTIVITY (FIRE) : Thermal decomposition products: Fire may produce irritating, corrosive and/or toxic gasses. Decomposition releases oxygen and heat which can support combustion and cause pressure build-up in confined spaces or containers. Decomposition in the presence of organic materials can be highly exothermic and

may cause combustion. These substances will accelerate burning when involved in a fire. May be corrosive to metals.

**SPECIAL INSTRUCTIONS TO FIRE FIGHTERS** 

PRECAUTIONARY MEASURES : Exercise caution when fighting any chemical fire.

**FIREFIGHTING INSTRUCTIONS**: Use water spray or fog for cooling exposed containers.

PROTECTION DURING : Do not enter fire area without proper protective equipment, including respiratory

FIREFIGHTING protection

**HAZARDOUS COMBUSTION**: Potassium oxides. May liberate toxic gases. Sodium oxides. Phosphorous oxides.

Nitrogen oxides. Carbon oxides (CO, CO<sub>2</sub>). Explosive Hydrogen gas.

**OTHER INFORMATION (FIRE)**: Do not allow run-off from fire fighting to enter drains or water courses.

### **SECTION 6 – ACCIDENTAL RELEASE MEASURES**

PERSONAL PRECAUTIONS,
PROTECTIVE EQUIPMENT AND
EMERGENCY PROCEDURES
ENVIRONMENTAL PRECAUTIONS

**PRODUCTS** 

Do not allow product to spread into the environment. Do NOT breathe vapors, mist or spray. Avoid all contact with skin, eyes or clothing. Use appropriate personal protective equipment (PPE). Evacuate unnecessary personnel. Ventilate are.

Keep spilled material away from sewage/drainage systems and waterways. This product contains a U.S. EPA Reportable Quantity (RQ) substance. If amounts exceeding the Reportable Quantity are released, notification of the National Response Center (800) 424-8802 is required. See section15 for more information.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEAN-UP

**Containment:** Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. As an immediate precautionary measure, isolate spill or leak area in all directions.

**Cleaning Up:** Clear up spills immediately and dispose of waste safely. Absorb spillage to prevent material damage. Contact competent authorities after a spill.

### **SECTION 7 – HANDLING AND STORAGE**

PRECAUTIONS FOR SAFE HANDLING

: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and again when leaving work. Do not eat, drink or smoke when using this product. Wash hands and forearms thoroughly after handling.

**CONDITIONS FOR SAFE STORAGE** 

Store in a dry, cool and well ventilated place. Keep container closed when not in use. Keep/store away from extremely high or low temperatures, direct sunlight, heat and incompatible materials (Strong acid, Strong oxidizers).









### SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

**TLV (THRESHOLD LIMIT VALUE)** : The TLV in section in section III is the ACGIH/TLV-TWA (threshold limit value/time weighted average concentration for an eight hour work day). The STEL is the short

term exposure limit and the (Ceil) is the ceiling limit.

COMPONENT	OSHA PEL – TWA	ACGIH – TLV	ACGIH – STEL
Hydrogen Peroxide	1 ppm (1.4 mg/m <sup>3</sup> )	1 ppm (1.4 mg/m <sup>3</sup> )	Not Established
Ethylene Glycol Monobutyl Ether	Not Established	Not Established	Not Established
Diethylene Glycol Monobutyl Ether	Not Established	Not Established	Not Established
Acrylate Copolymer, Sodium salt	Not Established	Not Established	Not Established
Alcohol Ethoxylate	Not Established	Not Established	Not Established
Aminotrimethylene Phosphonic Acid	Not Established	Not Established	Not Established

**EYE PROTECTION** Wear chemical splash goggles or face shield.

SKIN PROTECTION Minimize contact with product. Wear chemical resistant coveralls, boots, gloves,

apron and/or suitable long-sleeved clothing.

: In case of brief exposure use respiratory filter device. In case of intensive or longer RESPIRATORY PROTECTION

exposure, use respiratory protective device that is independent of circulating air.

**VENTILATION** Ensure adequate ventilation.

**ADDITIONAL MEASURES** Emergency eyewash and safety shower facilities should be available in the

immediate work area.

REQUIRED WORK/HYGIENE Wash hands thoroughly after handling. Keep away from all food stuffs, beverages

and feed. Do not eat, drink or smoke in work area.

#### **SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES**

**APPEARANCE** Clear liquid with mild odor

ODOR Mild odor **ODOR THRESHOLD** Not available  $5.5 \pm 0.5$ MELTING POINT/FREEZING Not available

POINT

**BOILING POINT** Not available Not applicable **FLASHPOINT EVAPORATION RATE** Not available

FLAMMABILITY Non flammable, Non combustible

**LOWER FLAMMABILITY LIMIT** Not applicable **UPPER FLAMMABILITY LIMIT** Not applicable Not available **VAPOR PRESSURE** Not available VAPOR DENSITY (AIR=1)

RELATIVE DENSITY : 1.03

**SOLUBILITY IN WATER** Soluble in water PARTITION COEFFICIENT n-Not available

OCTANOL/WATER

**AUTOIGNITION TEMPERATURE** Not available **DECOMPOSITION TEMPERATURE** Not available

### **SECTION 10 - STABILITY AND REACTIVITY**

**REACTIVITY** May react with strong reducing agents.

Stable under normal recommended storage conditions. STABILITY

HAZARDOUS CONDITIONS TO :

Avoid incompatible materials, heat, sparks and flames. Avoid sunlight.

AVOID

**INCOMPATIBLE MATERIALS** Acids, bases, salts of heavy metals, reducing agents, organic materials and

flammable substances.

HAZARDOUS Oxygen. Contamination with many substances will cause decomposition. The rate DECOMPOSITION :

**PRODUCTS** 

of decomposition increases with temperature increases and may be very vigorous with rapid generation of oxygen and steam.

#### **SECTION 11 – TOXICOLOGICAL INFORMATION**

TOXICOLOGICAL INFORMATION

Hydrogen Peroxide

EYE EFFECTS
SKIN EFFECTS

: 35% hydrogen peroxide: Extremely irritating/corrosive (rabbit).

ACUTE TOXICITY

35% hydrogen peroxide: Mildly irritating after 4-hour exposure (rabbit).
 DERMAL LD50: 35% hydrogen peroxide: > 2,000 mg/kg (rabbit) [FMC Study Number:

183-745] ORAL LD50: 35% hydrogen peroxide: > 2,000 mg/kg (rabbit) [FMC Study Number: 183-746] ORAL LD50: 35% hydrogen peroxide: 1,193 mg/kg (rat) [FMC Study Number: 183-745] INHALATION LC50: 50% hydrogen peroxide: > 0.17 mg/l (rat) [FMC Study

Number: 189-1080],

**TARGET ORGANS** 

: Eyes, Nose Throat and Lungs.

ACUTE EFFECTS FROM OVER

**EXPOSURE** 

Extremely irritating/corrosive to eyes and gastrointestinal tract. May cause irreversible tissue damage to the eyes including blindness. Inhalation of mist or vapors may be severely irritating to nose, throat and lungs. May cause skin irritation.

CHRONIC EFFECTS FROM OVER

**EXPOSURE** 

: The International Agency for Research on Cancer (IARC) has concluded that there is inadequate evidence for carcinogenicity of hydrogen peroxide in humans, but limited evidence in experimental animals (Group 3 - not classifiable as to its carcinogenicity to humans). The American Conference of Governmental Industrial Hygienists (ACGIH) has concluded that hydrogen peroxide is a 'Confirmed Animal Carcinogen with Unknown Relevance to Humans' (A3).

**CARCINOGENICITY** : IARC: Cat 3, NTP: Not listed, OSHA: Not listed, OTHER: ACGIH: Cat A3.

: Ethylene Glycol Monobutyl Ether

TOXICOLOGICAL INFORMATION ACUTE ORALTOXICITY

: LD50 Oral: 1,414 mg/kg Species: guinea pig Remarks: Ingestion may cause weakness, confusion, anxiety, decreased blood pressure, and CNS depression with collapse and coma. LD50 Oral (rat): 1746 mg/kg.

ACUTE INHALATION TOXICITY

: LC50: ~ 932 ppm Exposure time: 4 HOURS Species: guinea pig Remarks: Exposure to vapor may cause irritation of the eyes, nose, and respiratory tract. May cause nausea. May cause headaches. Extensive and prolonged contact with skin may cause confusion, anxiety, decreased blood pressure, and CNS depression with collapse and

coma. LC50 Inhalation (rat) 7hr: ~ 700 ppm.

**ACUTE DERMAL TOXICITY** 

: LD50: > 2,000 mg/kg Species: guinea pig Remarks: Minimal hazard by skin contact with liquid or vapor. This material may be absorbed through the skin. High dermal doses (most likely achieved from exposure to undiluted liquid) may cause weakness, headache and nausea. Extensive and prolonged contact with skin may cause confusion, anxiety, decreased blood pressure, and CNS depression with collapse and

coma

**IRRITATION** : Skin: Repeated or prolonged contact may cause skin irritation.

Eyes: Moderate to severe eye irritant.

SENSITISATION

: Did not cause sensitization on lab animals.

**CARCINOGENICITY** : No component of this product present at levels greater than or equal to 0.1% is

identified as probable or confirmed human carcinogen by IARC, ACGIH, NTP, and

OSHA.

**TOXICOLOGICAL INFORMATION** 

: Diethylene Glycol Monobutyl Ether (DB)

ACUTE TOXICITY CHRONIC EFFECTS

: Oral LD50 Oral (rat): 5560 mg/kg. LC50 dermal and inhalation: Not listed.

: Prolonged absorption causes liver and kidney damage, and red cell haemolysis (blood in urine) in laboratory animals; no such effects have been seen in humans

SENSITISATION CARCINOGENICITY

Not a sensitizer.

No component of this product present at levels greater than or equal to 0.1% is identified as probable or confirmed human carcinogen by IARC, ACGIH, NTP, and OSHA.

TOXICOLOGICAL INFORMATION

IOXICOLOGICAL INFORMATION : A

: Acrylate Copolymer, Sodium salt (4022)

**ACUTE TOXICITY** : Not determined. Similar products tested for LD50 limit values are greater than

10,000 mg/kg. TLV: Not determined.

**EFFECTS OF ACUTE OVER** 

**EXPOSURE** 

: Ingestion: Nausea may occur. Inhalation: Prolonged exposure may produce

headaches, and mucous membrane irritation. Skin Contact: Direct contact may cause

irritation. Eye Contact:

**EFFECTS OF CHRONIC OVER** 

**EXPOSURE** 

None determined.

TOXICOLOGICAL INFORMATION : Ethoxylated Alcohol 91-6
ACUTE TOXICITY : LD50 Oral (rat): 1,378 mg/kg,

**INHALATION LC50** : No data available.

**DERMAL LD50** : LD50 Dermal (rat): > 5,000 mg/kg. **PRIMARY SKIN IRRITATION** : (Rabbit) Moderate to severely irritating.

**PRIMARY EYE IRRITATION** : (Rabbit) Severely irritating.

TOXICOLOGICAL INFORMATION :

**ACUTE TOXICITY** 

Aminotrimethylene Phosphonic acid (ATMP)
 LD50 Oral (Rat): 2910mg/kg, LD50 Dermal (Rabbit): > 6310mg/kg.

**CHRONIC EFFECTS ON HUMANS** 

· Cluber and

Rat 24months: > 500 mg/kg. Conclusion: Practically non toxic.

OTHER TOXIC EFFECTS ON

**HUMANCS** 

Skin and Eyes (Rabbit): Moderate Irritant.

#### SECTION 12 - ECOLOGICAL INFORMATION

**ECOLOGICAL INFORMATION** 

**ECOTOXICICOLOGICAL** 

INFORMATION

: Hydrogen Peroxide

Channel catfish 96-hour LC50 = 37.4 mg/L Fathead minnow 96-hour LC50 = 16.4 mg/L Daphnia magna 24-hour EC50 = 7.7 mg/L Daphnia pulex 48-hour LC50 = 2.4 mg/L Freshwater snail 96-hour LC50 = 17.7 mg/L

For more information refer to ECETOC "Joint Assessment of Commodity Chemicals

No. 22, Hydrogen Peroxide." ISSN-0773-6339, January 1993

**CHEMICAL FATE INFORMATION** 

Hydrogen peroxide in the aquatic environment is subject to various reduction or oxidation processes and decomposes into water and oxygen. Hydrogen peroxide half-life in freshwater ranged from 8 hours to 20 days, in air from 10-20 hrs. and in soils from minutes to hours depending upon microbiological activity and metal

contaminants.

**ECOLOGICAL INFORMATION** 

**ECOTOXICITY** 

: Ethylene Glycol Monobutyl Ether (EB)

: Fish: 96h LC50:>100 mg/L (Oryzias latipes)

Crustacea: 48h EC50:>1000 mg/L (Daphnia magna)

Algae: 72h EC50:630 mg/L (Selenastrum capricornutum)

96.0% (by BOD), 96.0% (by TOC), 100% (by GC).

PERSISTENCE AND DEGRADABILITY

MOBILITY IN SOIL

No data available.

ECOLOGICAL INFORMATION

**ECOTOXICITY** 

: Diethylene Glycol Monobutyl Ether (DB)

: This product cannot accumulate in living tissue; diluted, this product is readily and

rapidly in a wastewater treatment facility; in BOD test, 88% degraded in 28 says;

half-life in air estimated as 10 hours.

PERSISTENCE AND DEGRADABILITY

: No data available.

**ECOLOGICAL INFORMATION** 

**ECOTOXICITY** 

: Acrylate Copolymer, Sodium salt

: If this product becomes a waste, it does not exhibit the properties of ignitability, corrosivity, reactivity or environmentally persistent toxicity. The material should not be flushed into any sewer system. This product should not be released to the environment without chemical treatment by flocculation / precipitation.

**ECOLOGICAL INFORMATION** 

**ECOTOXICITY** 

**Ethoylated Alchol 91-6** 

LC50 Rainbow Trout: 1-10 mg/l, 96hr. Value estimated from tests on similar

products.

LC50 Fathead Minow: 6 mg/l, 96hr. Value estimated from tests on similar products.

**BIODEGRADABILITY** PERSISTENCE AND **DEGRADABILITY** 

No data available.

Readily biodegradable.

**BIOACCUMULATIVE POTENTIAL** : No data available.

**ECOLOGICAL INFORMATION** 

: Aminotrimethylene Phosphonic Acid (ATMP)

**ECOTOXICITY** 

Acute LC50 fish (fresh water)14 days: 160mg/L, LC50 Daphnia-Daphnia Magna

(fresh water) 48hr: 297 mg/L, LC50 Daphnia (marine water) 48hr: 94mg/L

**CHRONIC TOXICITY** : Fish (fresh water) 60 days @ 23mg/L: No observable effect. Daphnia (fresh water)

28 days @ >25mg/L: No observable effect

**BIODEGRADATION** 

TOXICITY OF PRODUCTS OF

**BIODEGRADATION** 

Biodegradable. The product and products of biodegradation are not toxic.

### **SECTION 13 – DISPOSAL CONSIDERATIONS**

WASTE DISPOSAL

: This product must be disposed of in accordance with Federal, state and local environmental regulations. Discarded materials may be considered hazardous waste due to pH/corrosivity. It is the responsibility of the product user to determine at the time of disposal whether a material containing, or derived from this product, should be classified as a hazardous waste.

### **SECTION 14 – TRANSPORTATION INFORMATION**

DOT/IMDG/ IATA PROPER

**SHIPPING NAME** 

**UN NUMBER** 

N/A

HAZARD CLASS AND LABEL

N/A N/A N/A N/A

PACKAGING GROUP **EPA REPORTABLE QUANTITY** 

(RQ)

: N/A

MARINE POLLUTANT **EMERGENCY RESPONSE** 

N/A

**GUIDE** 

### **SECTION 15 – REGULATORY INFORMATION**

**U.S. FEDERAL REGULATORY INFORMATION:** 

LISTED CARCINOGEN

**TSC STATUS** The ingredients of this product are listed on TSCA (Toxic Substances Control Act)

inventory (40CFR 710.)

**SARA SECTION 302** 

SARA SECTION 311/312 Immediate (acute) health hazard. Reactive hazard. (Sodium Percarbonate)

**HAZARD CLASS** 

**SARA SECTION 313** None NFPA HEALTH 2 NFPA FLAMMABILITY : 0 NFPA REACTIVITY : 1

### **EUROPEAN UNION REGULATORY INFORMATION:**

**EC CLASSIFICATION** : Xi: Irritant.

DSD/DPD RISK (R) PHRASES : R38: Irritating to skin.

R22: Harmful is swallowed.

: S1/2: Keep locked up and out of reach of children. DSD/DPD SAFETY (S)

**PHRASES** S18: Handle and open containers with care.

S26: In case of contact with eyes, rinse immediately with plenty

of water and seek medical advice.

S36/S37/39: Wear suitable protective clothing, gloves and

eye/face protection.

S45: In case of accidents or if you feel unwell, seek medical

advice immediately. Show label where possible.

S61: Avoid release to the environment.

S64: If swallowed, rinse mouth with water if victim is conscious.

### CANADIAN REGULATORY INFORMATION

WHMIS CATEGORY : Class D2B: Materials that cause other toxic effects

(TOXIC).

Listed

DOMESTIC SUBSTANCES LIST

INGREDIENT DISCLOSURE LIST: Listed, This product has been classified in accordance

with the hazard criteria of the Controlled Products Regulations (CPR) and the sds contains all of the

information required by the CPR.

### **SECTION 16 - OTHER INFORMATION**

DISCLAIMER : The information contained herein has been compiled from sources believed to be

> realiable and accurate to the best of our knowledge at this date. It is provided without warranty, expressed or implied, as to the results of use of this information or to the product to which it relates. Hydramaster Corp. assumes no responsibility for injury to any person or property resulting from any use of the material. Each user assumes the risk in their use of this product and should review the data and

recommendations in the specific context of their intended use.

**CERCLA** Comprehensive Environmental Response, Compensation, and Liability Act.

**EINECS European Inventory of Existing Commercial Chemical Substances** 

**IMDG** : International Maritime Code for Dangerous Goods **IARC** International Agency for Research on Cancer IATA International Air Transportation Association

American Conference of Governmental Industrial Hygienists **ACGIH** 

**NFPA** National Fire Protection Association (USA)

NTP **National Toxicology Program** 

Superfund Amendments and Reauthorization Act **SARA** 

**Toxic Substances Control Act TSCA** 

HMIS : Hazardous Materials Identification System (USA)WHMIS : Workplace Hazardous Materials Information System

**LC50** : Lethal concentration, 50 percent

**LD50** : Lethal dose, 50 percent

**STOT** : Systemic Target Organ Toxicity

DATE PREPARED : JAN 12, 2015 DATE REVISED : March 28, 2018