

MATERIAL SAFETY DATA SHEET

Prepared to U.S. OSHA, CMA, ANSI, Canadian WHMIS, Australian WorkSafe and European Community Standards

PART I What is the material and what do I need to know in an emergency?

1. PRODUCT IDENTIFICATION

TRADE NAME (AS LABELED): E-Z BOOST
CHEMICAL NAME/CLASS: Chlorinating Agent Mixture
SYNONYMS: None Allocated
U.N. NUMBER: 3077
U.N. DANGEROUS GOODS CLASS/SUBSIDIARY RISK: Class 9
HAZCHEM CODE (AUSTRALIA): None Allocated
POISONS SCHEDULE NUMBER (AUSTRALIA): None Allocated
PRODUCT USE: Water Purification
SUPPLIER/MANUFACTURER'S NAME: APi
U.S. ADDRESS: 880 Jupiter Park Dr. Suite 14
Jupiter, FL 33458
U.S. BUSINESS PHONE: 561-743-0449
U.S. EMERGENCY PHONE: CHEMTREC: 1-800-424-9300
DATE OF PREPARATION: January 13, 2005

2. COMPOSITION and INFORMATION ON INGREDIENTS

EU LABELING/CLASSIFICATION:

EU CLASSIFICATION: Harmful. Irritant. [Xn; Xi]

EU RISK PHRASES: Harmful if swallowed. Irritating to the eyes and skin. [R: 22, 36/38]. (See Section 15 for details on classification)

CHEMICAL NAME	CAS #	EINECS #	% w/v	EU CLASSIFICATION FOR COMPONENTS
Sodium Dichloro-isocyanurate Dihydrate	51580-86-0	Unlisted	56%	HAZARD CLASSIFICATION: Not applicable. RISK PHRASES: Not applicable.
Other components which are each present in less than 1 percent concentration (0.1% concentration for potential carcinogens, reproductive toxins, respiratory tract sensitizers, and mutagens).			Balance	HAZARD CLASSIFICATION: Not applicable. RISK PHRASES: Not applicable.

See Section 15 for full EU classification information of product and components.

NOTE (1): All WHMIS, Australian WorkSafe, and European Union required information is included. It is located in appropriate sections based on the ANSI Z400.1-1993 format.

3. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW: This is a white, granular solid with a mild chlorine odor. **Health Hazards:** The product may be moderately to severely irritating to contaminated tissues. **Flammability Hazards:** This material may ignite if exposed to temperatures above > 150° C (302° F). **Reactivity Hazards:** Significant heat may be generated when this product is added to water. Opening sealed containers of wetted product may result in inhalation of significant amounts of toxic gases. Pressurized containers of wetted product also have the potential to rupture. **Environmental Hazards:** This product is may be harmful or fatal to terrestrial animals, contaminated plants, and aquatic lifeforms. **Emergency Response:** Emergency responders must wear proper personal protective equipment for the incident to which they are responding.

SYMPTOMS OF OVEREXPOSURE BY ROUTE OF EXPOSURE: The most significant routes of occupational overexposure are inhalation and contact with skin and eyes. The symptoms of overexposure to this product, via route of entry, are as follows:

INHALATION: If dusts or particulates of this product are inhaled, symptoms of exposure may include breathing difficulty, irritation of the mucus membranes, coughing, nasal congestion, and a sore throat or burns to the respiratory system. Damage to the tissues of the respiratory system may occur, especially after prolonged exposures to this product.

CONTACT WITH SKIN or EYES: Contact with the eyes will cause moderate to severe irritation, pain, reddening, watering. Prolonged eye contact with high concentrations of this product may result in tissue damage and blindness. Depending on the duration of skin contact, skin contact may cause reddening, discomfort, and moderate to severe irritation.

3. HAZARD IDENTIFICATION (Continued)

SKIN ABSORPTION: Skin absorption is not a significant route of over-exposure for any component of this product.

INGESTION: Ingestion is not anticipated to be a likely route of occupational exposure to this product. If ingestion does occur, moderate to severe irritation of the mouth, throat, esophagus, and other tissues of the digestive system may occur. Symptoms of such over-exposure can include nausea, vomiting, diarrhea. Ingestion of large volumes of this product may be fatal.



INJECTION: Injection is not anticipated to be a significant route of overexposure for this product. Injection of this product (via puncture with a contaminated object) can cause pain and severe irritation, in addition to the wound.

HEALTH EFFECTS OR RISKS FROM EXPOSURE (An explanation in lay terms).

ACUTE: Depending on the duration of contact, over-exposures can mildly to moderately irritate the eyes, skin, mucous membranes, and any other exposed tissue. Severe, prolonged eye contact may result in blindness. If inhaled, irritation of the respiratory system may occur, with coughing and breathing difficulty. Severe ingestion over-exposures may be fatal.

CHRONIC: Repeated inhalation of dusts from this product may cause irritation or damage to lung tissue. Repeated skin contact may cause dermatitis (dry, red, cracked skin).

TARGET ORGANS: ACUTE: Respiratory system, skin, eyes. CHRONIC: Skin, respiratory system.

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM			
HEALTH HAZARD	(BLUE)	3	
FLAMMABILITY HAZARD	(RED)	1	
PHYSICAL HAZARD	(YELLOW)	2	
PROTECTIVE EQUIPMENT			
EYES	RESPIRATORY	HANDS	BODY
	SEE SECTION 8		SEE SECTION 8
For Routine Industrial Use and Handling Applications			
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe			

PART II *What should I do if a hazardous situation occurs?*

4. FIRST-AID MEASURES

Contaminated individuals must be taken for medical attention if any adverse effect develops. Rescuers should be taken for medical attention, if necessary. Take a copy of label and MSDS to health professional with victim.

SKIN EXPOSURE: If this product contaminates the skin and irritation develops, begin decontamination with running water. The minimum flushing time is 15 minutes for situations in which irritation occurs. Remove exposed or contaminated clothing, taking care not to contaminate eyes. Contaminated individuals must seek medical attention if any adverse effect continues after flushing.

EYE EXPOSURE: If dusts or particulates of this product enter the eyes, open victim's eyes while under gently running water. Use sufficient force to open eyelids. Have victim "roll" eyes. Minimum flushing is for 15 minutes. Contaminated individuals must seek medical attention if any adverse effect continues after flushing.

INHALATION: If dusts or particulates of this product are inhaled, remove victim to fresh air. Have the contaminated individual blow nose.

INGESTION: If this product is swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. If professional advice is not available, do not induce vomiting. Victim should drink milk, egg whites, or large quantities of water. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or unable to swallow.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Acute or chronic skin conditions or disorders involving the "Target Organs" (see Section 3, "Hazard Identification") may be aggravated by overexposure to dusts of this product.

RECOMMENDATIONS TO PHYSICIANS: Treat symptoms and eliminate overexposure.

5. FIRE-FIGHTING MEASURES

FLASH POINT: > 150° C (302° F)

AUTOIGNITION TEMPERATURE: Not flammable.

FLAMMABLE LIMITS (in air by volume, %):

Lower (LEL): Not applicable.

Upper (UEL): Not applicable.

5. FIRE-FIGHTING MEASURES (Continued)

FIRE EXTINGUISHING MATERIALS:

Water Spray: YES

Foam: YES

Halon: YES

Carbon Dioxide: YES

Dry Chemical: YES

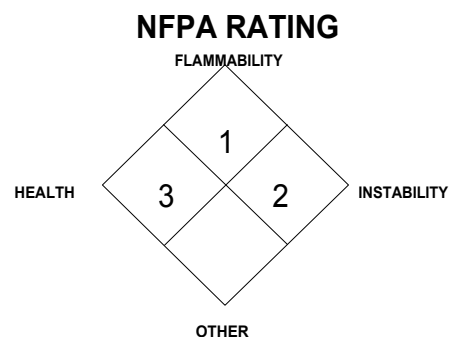
Other: Any "ABC" Class.

UNUSUAL FIRE AND EXPLOSION HAZARDS: This product is a potential irritant and may present a contact hazard to firefighters. When involved in a fire, this material may decompose and produce irritating vapors and toxic gases (e.g., chlorine). Contact with water can produce Nitrogen Trichloride. Closed containers may rupture or explode in a fire, especially if product has become wetted.

Explosion Sensitivity to Mechanical Impact: Not sensitive.

Explosion Sensitivity to Static Discharge: Not sensitive.

SPECIAL FIRE-FIGHTING PROCEDURES: Prevent the spread of any released product to combustible objects. Structural fire-fighters must wear Self-Contained Breathing Apparatus and full protective equipment. Move containers from fire area if it can be done without risk to personnel. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas. Rinse contaminated equipment thoroughly with soapy water before returning such equipment to service.



Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate
3 = Serious 4 = Severe

6. ACCIDENTAL RELEASE MEASURES

RELEASE RESPONSE: Uncontrolled releases should be responded to by trained personnel using pre-planned procedures. Proper protective equipment should be used. In case of a spill, clear the affected area and protect people. For small releases (e.g., 2 pound release), clean-up spilled solid wearing gloves, goggles, and suitable body protection. The minimum Personal Protective Equipment recommended for response to non-incident releases (e.g., 300 pound release) should be Level C: triple-gloves (rubber gloves, nitrile gloves over latex gloves), chemical resistant suit and boots, hard-hat, and an air-purifying respirator (with high efficiency particulate filter). Level B, which includes a Self-Contained Breathing Apparatus, must be worn when oxygen levels are below 19.5% or unknown. Sweep-up or vacuum spilled solid. Triple-rinse area with water. Place all spill residue in a suitable container. Dispose of in accordance with applicable U.S. Federal, State, or local procedures, or the appropriate standards of Canada, Australia, and EU Member States (see Section 13, Disposal Considerations).

PART III *How can I prevent hazardous situations from occurring?*

7. HANDLING and STORAGE

WORK AND HYGIENE PRACTICES: As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash thoroughly after using this product. Do not eat, drink, smoke, or apply cosmetics while handling this product. Avoid breathing dusts generated by this product. Use in a well-ventilated location. Wipe-down area routinely to avoid the accumulation of dusts of this product. Remove contaminated clothing immediately.

STORAGE AND HANDLING PRACTICES: All employees who handle this material should be trained to handle it safely. Keep container tightly closed when not in use. Store containers in a cool, dry location, away from direct sunlight, or sources of intense heat. Material should be stored in secondary containers. Store containers away from incompatible chemicals (see Section 10, Stability and Reactivity). Store containers away from wood, cardboard boxes, and other combustible materials. Inspect all incoming containers before storage, to ensure containers are properly labeled and not damaged. Do not seal a container into which wetted product has been placed. The wetted product will generate toxic gases (e.g., sulfur compounds). If this reaction occurs in a sealed container, there will be a build-up of pressure, which can result in an inhalation exposure to a significant level of toxic substances upon opening the container. Additionally, there is the potential for the pressurized container to rupture. Empty containers may contain residual particulates; therefore, empty containers should be handled with care. Never store food, feed, or drinking water in containers which held this product.

PROTECTIVE PRACTICES DURING MAINTENANCE OF CONTAMINATED EQUIPMENT: Follow practices indicated in Section 6 (Accidental Release Measures). Make certain that application equipment is locked and tagged-out safely, if necessary. Collect all rinsates and dispose of according to applicable U.S. Federal, State, or local procedures, or the appropriate standards of Canada, Australia, and EU Member States.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION

VENTILATION AND ENGINEERING CONTROLS: Use with adequate ventilation to ensure exposure levels are maintained below the limits provided in Section 2 (Composition and Information on Ingredients), if applicable. Ensure eyewash/safety shower stations are available near areas where this product is used.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION (Continued)

EXPOSURE LIMITS:

CHEMICAL NAME	CAS #	EINECS #	Proportion (w/w%)	EXPOSURE LIMITS IN AIR					
				ACGIHTLV		OSHA-PEL		NIOSH IDLH ppm	OTHER ppm
				TWA ppm	STEL ppm	TWA ppm	STEL ppm		
Sodium Dichloro-isocyanurate Dihydrate Currently, there are no exposure limits for this compound. It is recommended that the following exposure limits for Chlorine be followed.	51580-86-0	Unlisted	56%	0.5	1	0.5 (Vacated PEL)	1 (ceiling)	10	NIOSH REL: STEL = 0.5 (ceiling) 15 minutes DFG MAKs: TWA = 0.5 PEAK = 1, MAK, 15 minutes average value, 1-hr interval DFG MAK Pregnancy Risk Classification: C Carcinogen: TLV-A4
Other components which are each present in less than 1 percent concentration (0.1% concentration for potential carcinogens, reproductive toxins, respiratory tract sensitizers, and mutagens).			Balance	None of the other components contribute significant additional hazards at the concentrations present in this product. All pertinent hazard information has been provided in this document, per the requirements of the Federal Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalent Standards and Canadian Workplace Hazardous Materials Identification System Standards, European Council Directives, and Australian WorkSafe Regulations.					

NE = Not Established. See Section 16 for Definitions of Terms Used.

INTERNATIONAL OCCUPATIONAL EXPOSURE LIMITS: Currently, there are no international exposure limits established for the component of this product. The following are exposure limits for the related compound, Chlorine.

CHLORINE:

Arab Republic of Egypt: TWA = 1 ppm (3 mg/m³), JAN 1993
 Australia: TWA = 1 ppm (3 mg/m³), JAN 1993
 Austria: MAK = 0.5 ppm (1.5 mg/m³), JAN 1999
 Belgium: TWA = 0.5 ppm (1.5 mg/m³), STEL = 1 ppm, JAN 1993
 Denmark: TWA = 0.5 ppm (1.5 mg/m³), JAN 1999
 Finland: TWA = 0.5 ppm (1.5 mg/m³), STEL = 1 ppm (3 mg/m³), JAN 1999
 Germany: MAK = 0.5 ppm (1.5 mg/m³), JAN 1999
 Hungary: STEL = 1 mg/m³, JAN 1993

CHLORINE (continued):

India: TWA = 1 ppm (3 mg/m³), STEL = 3 ppm (9 mg/m³), JAN 1993
 Japan: OEL = 1 ppm (2.9 mg/m³), JAN 1999
 The Netherlands: MAC-TGG = 1 ppm (3 mg/m³), JAN 1999
 The Philippines: TWA = 1 ppm (3 mg/m³), JAN 1993
 Poland: MAC(TWA) = 1.5 mg/m³, STEL = 9 mg/m³, JAN 1999
 Russia: TWA = 1 ppm, STEL = 1 mg/m³, JAN 1993

CHLORINE (continued):

Sweden: NGV = 0.5 ppm (1.5 mg/m³), TGV(C) = 1 ppm (3 mg/m³), JAN 1999
 Switzerland: MAK-W = 0.5 ppm (1.5 mg/m³), KZG-W = 1 ppm (3 mg/m³), JAN 1999
 Turkey: TWA = 1 ppm (3 mg/m³), JAN 1993
 United Kingdom: TWA = 0.5 ppm (1.5 mg/m³), STEL = 1 ppm (2.9 mg/m³), SEP 2000
 In Argentina, Bulgaria, Colombia, Jordan, Korea, New Zealand, Singapore, Vietnam, New Zealand, Singapore, Vietnam check ACGIH TLV

RESPIRATORY PROTECTION: Maintain airborne contaminant concentrations below exposure limits listed in Section 2 (Composition and Information on Ingredients), if applicable. Dust masks should be worn if operations will generate excessive dusts or particulates. If respiratory protection is needed, use only protection authorized in the U.S. Federal OSHA Standard (29 CFR 1910.134), equivalent U.S. State standards, Canadian CSA Standard Z94.4-93, the European Standard EN149, and EC member states. Oxygen levels below 19.5% are considered IDLH by OSHA. In such atmospheres, use of a full-facepiece pressure/demand SCBA or a full facepiece, supplied air respirator with auxiliary self-contained air supply is required under OSHA's Respiratory Protection Standard (1910.134-1998).

EYE PROTECTION: Splash goggles or safety glasses. If necessary, refer to U.S. OSHA 29 CFR 1910.133, the European Standard EN166 and appropriate Standards of Canada for further information.

HAND PROTECTION: Use rubber or neoprene gloves. Use triple gloves for spill response, as stated in Section 6 (Accidental Release Measures) of this MSDS. If necessary, refer to U.S. OSHA 29 CFR 1910.138, and appropriate Standards of the EC and Canada for further information.

BODY PROTECTION: Use body protection appropriate for task. An apron, Tyvek suit, or other impermeable body protection is suggested if operations will generate excessive dusts. Full-body chemical protective clothing is recommended for emergency response procedures. If a hazard of injury to the feet exists due to falling objects, rolling objects, where objects may pierce the soles of the feet or where employee's feet may be exposed to electrical hazards, use foot protection, as described in U.S. OSHA 29 CFR 1910.136.

9. PHYSICAL and CHEMICAL PROPERTIES

RELATIVE VAPOR DENSITY (air = 1): Not applicable.

SPECIFIC GRAVITY (water = 1): 29 g/100 g

VAPOR PRESSURE: Not applicable.

ODOR THRESHOLD: Not applicable.

COLOR: White

VISCOSITY: Not applicable.

EVAPORATION RATE (n-BuAc = 1): Not applicable.

BOILING POINT: Not applicable.

pH (1% solutions): 6.0-7.0

FORM: White granules.

ODOR: Mild, chlorine-like.

FLASH POINT: > 150° C (302° F)

9. PHYSICAL and CHEMICAL PROPERTIES (Continued)

COEFFICIENT OF OIL/WATER DISTRIBUTION (PARTITION COEFFICIENT): Not available.

HOW TO DETECT THIS SUBSTANCE (warning properties): The appearance and odor may act as a distinguishing characteristic.

10. STABILITY and REACTIVITY

STABILITY: Stable under conditions of normal temperature and pressure. This product can react in presence of water to form Nitrogen Trichloride. Product loses less than 1% chlorine after standing one year at 40° C (104° F).

DECOMPOSITION PRODUCTS: Products of thermal decomposition may include chlorine, and sodium compounds. In contact with water, this product can produce nitrogen trichloride with generation of heat. Material that has been exposed to water and then put in sealed containers poses a risk of explosion.

MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: This product is incompatible with water, oxidant and reducing agents, acids, alkalis, nitrogen, ammonium salts, urea, amines, quaternary ammonium derivatives, oils, fats, peroxides and cationic tensioactives.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Avoid exposure or contact to incompatible chemicals, water and temperatures above 50° C (122°).

PART IV *Is there any other useful information about this material?*

11. TOXICOLOGICAL INFORMATION

TOXICITY DATA: Currently, there are specific toxicology data available for this material.

SUSPECTED CANCER AGENT: This compound is not listed by agencies tracking the carcinogenic potential for chemical compounds are not found on the following lists: FEDERAL OSHA Z LIST, NTP, IARC, and CAL/OSHA and therefore are not considered to be, nor suspected to be, cancer-causing agents by these agencies.

IRRITANCY OF PRODUCT: This product can moderately to severely irritate to contaminated tissue.

SENSITIZATION TO THE PRODUCT: This compound is not known to be a skin or respiratory sensitizer.

REPRODUCTIVE TOXICITY INFORMATION: Listed below is information concerning the effects of this product and its components on the human reproductive system.

Mutagenicity: This compound is not reported to produce mutagenic effects in humans.

Embryotoxicity: This compound is not reported to produce embryotoxic effects in humans.

Teratogenicity: This compound is not reported to cause teratogenic effects in humans.

Reproductive Toxicity: This compound is not reported to cause reproductive effects in humans..

A *mutagen* is a chemical which causes permanent changes to genetic material (DNA) such that the changes will propagate through generational lines. An *embryotoxin* is a chemical which causes damage to a developing embryo (i.e. within the first eight weeks of pregnancy in humans), but the damage does not propagate across generational lines. A *teratogen* is a chemical which causes damage to a developing fetus, but the damage does not propagate across generational lines. A *reproductive toxin* is any substance which interferes in any way with the reproductive process.

ACGIH BIOLOGICAL EXPOSURE INDICES: Currently, there are no ACGIH Biological Exposure Indices (BEIs) determined for this material.

12. ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

ENVIRONMENTAL STABILITY: Currently, there is no information on the stability of this material in the environment.

EFFECT OF MATERIAL ON PLANTS or ANIMALS: No specific data is available on the effect to plants and animals this product. If accidentally released, the product could harm plants and animals.

EFFECT OF CHEMICAL ON AQUATIC LIFE: No specific data is available on the effect of this product in an aquatic environment. If accidentally released to an aquatic environment, it could harm or kill aquatic life, as a chlorinating agent.

SPECIFIC GERMAN ENVIRONMENTAL LISTINGS:

Aquatic Hazard Class (WGK): As no specific Hazard Class has been assigned to this material, the default class is Hazard Class 2.

13. DISPOSAL CONSIDERATIONS

PREPARING WASTES FOR DISPOSAL: Waste should be diluted with a great quantity of water treated with sodium carbonate and sodium sulfite and then can be poured to the sewer. Follow local regulations. Waste only contains a mixture of salts and cyanuric acid which is biodegradable. Disposal of dry product is by incineration mixing product with solvents. The incinerator should be provided with a washing system for chlorine combustion gases. Waste disposal must be in accordance with appropriate U.S. Federal, State, and local regulations, those of Canada and its Provinces, as well as those applicable to the EC Member States or Australia. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority.

13. DISPOSAL CONSIDERATIONS (Continued)

U.S. EPA WASTE NUMBER: Wastes of this product should be tested to see if they meet the criteria for D002, Waste Characteristic Corrosivity.

14. TRANSPORTATION INFORMATION

THIS MATERIAL IS HAZARDOUS AS DEFINED BY 49 CFR 172.101 BY THE U.S. DEPARTMENT OF TRANSPORTATION.

PROPER SHIPPING NAME: Environmentally hazardous substances, solid, n.o.s. (Sodium Dichloro-Isocyanurate Dihydrate)
HAZARD CLASS NUMBER and DESCRIPTION: 9 (Miscellaneous Dangerous Goods)
UN IDENTIFICATION NUMBER: UN 3077
PACKING GROUP: III
DOT LABEL(S) REQUIRED: Class 9
NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER, 2004: 171
MARINE POLLUTANT: Sodium Dichloro-Isocyanurate Dihydrate is not designated to be a marine pollutant, as designated by the US DOT, per Appendix B to 49 CFR 172.101.

TRANSPORT CANADA, TRANSPORTATION OF DANGEROUS GOODS REGULATIONS: THIS MATERIAL MAY BE CONSIDERED AS DANGEROUS GOODS. Use the above information for the preparation of Canadian Shipments.

PROPER SHIPPING NAME: Environmentally hazardous substances, solid, n.o.s. (Sodium Dichloro-Isocyanurate Dihydrate)
HAZARD CLASS NUMBER and DESCRIPTION: 9 (Miscellaneous Dangerous Goods)
UN IDENTIFICATION NUMBER: UN 3077
HAZARD LABEL (S) REQUIRED: Class 9 (Miscellaneous Dangerous Goods)
PACKING GROUP: III
SPECIAL PROVISIONS: 16
EXPLOSIVE LIMIT & LIMITED QUANTITY INDEX: 5
ERAP INDEX: None
PASSENGER CARRYING SHIP INDEX: None
PASSENGER CARRYING ROAD OR RAIL VEHICLE INDEX: None

INTERNATIONAL MARITIME ORGANIZATION (IMO): This product is regulated as dangerous goods by the IMO; the following information is applicable to shipments of this product by vessel:

UN IDENTIFICATION NUMBER: UN 3077
PROPER SHIPPING NAME: Environmentally hazardous substances, solid, n.o.s. (Sodium Dichloro-Isocyanurate Dihydrate)
HAZARD CLASS NUMBER and DESCRIPTION: Class 9 (Miscellaneous Dangerous Goods)
PACKING GROUP: III
SPECIAL PROVISIONS: 274, 909, 944
HAZARD LABEL(S) REQUIRED: Class 9 (Miscellaneous Dangerous Goods)
LIMITED QUANTITIES: 5 kg
PACKING INSTRUCTION: P002, LP02
EmS: F-U, S-F
STOWAGE AND SEGREGATION: Category A

EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD (ADR): This material is considered by the United Nations Economic Commission for Europe to be dangerous goods.

UN NUMBER: UN 3077
NAME AND DESCRIPTION: Environmentally hazardous substances, solid, n.o.s. (Sodium Dichloro-Isocyanurate Dihydrate)
CLASS: 9
CLASSIFICATION CODE: M7
PACKING GROUP: III
LABELS: 9
SPECIAL PROVISIONS: 274
LIMITED QUANTITIES: LQ27
PACKING INSTRUCTION: P200
MIXED PACKING INSTRUCTION: MP10
HAZARD IDENTIFICATION NUMBER: 90

14. TRANSPORTATION INFORMATION (Continued)

AUSTRALIAN FEDERAL OFFICE OF ROAD SAFETY CODE FOR THE TRANSPORTATION OF DANGEROUS GOODS BY ROAD OR RAIL: This material is classified as dangerous goods under Australian transportation standards.

PROPER SHIPPING NAME: Environmentally hazardous substance, solid, n.o.s. (Sodium Dichloro-

Isocyanurate Dihydrate)

HAZARD CLASS NUMBER and DESCRIPTION: Class 9 (Miscellaneous Dangerous Goods)

PACKING GROUP: III

HazChem CODE: 2X

SPECIAL PROVISIONS: SP179, SP 274

PACKAGING METHOD: 3.8.9

15. REGULATORY INFORMATION

ADDITIONAL U.S. REGULATIONS:

U.S. SARA REPORTING REQUIREMENTS: Sodium Dichloro-Isocyanurate Dihydrate is not subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act.

U.S. SARA THRESHOLD PLANNING QUANTITY: There are no specific Threshold Planning Quantities for Sodium Dichloro-Isocyanurate Dihydrate. The default Federal MSDS submission and inventory requirement filing threshold of 10,000 lb (4,540 kg) may apply, per 40 CFR 370.20.

U.S. CERCLA REPORTABLE QUANTITY (RQ): Not applicable.

U.S. TSCA INVENTORY STATUS: Sodium Dichloro-Isocyanurate Dihydrate is listed on the TSCA Inventory.

OTHER U.S. FEDERAL REGULATIONS: The regulations of the Federal Insecticide, Fungicide, and Rodenticide Act are applicable to this product.

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65): Sodium Dichloro-Isocyanurate Dihydrate is not on the California Proposition 65 lists.

ANSI LABELING (Z129.1): **WARNING!** MAY BE HARMFUL OR FATAL IF SWALLOWED. CAUSES SKIN AND EYE IRRITATION. HARMFUL IF INHALED. REOPENING SEALED CONTAINERS OF WET PRODUCT MAY RESULT IN INHALATION EXPOSURES TO TOXIC GASES. SEALED CONTAINERS OF WET PRODUCT MAY RUPTURE. Do not taste or swallow. Do not get on skin or in eyes. Avoid breathing dusts or particulates. Keep container closed. Do not seal containers in which wet product has been placed. Use only with adequate ventilation. Wash thoroughly after handling. Wear gloves, goggles, suitable body protection, and NIOSH/MSHA-approved respiratory protection, as appropriate. Keep from contact with clothing and other combustible materials. **FIRST-AID:** In case of contact, immediately flush skin or eyes with plenty of water. If inhaled, remove to fresh air. If ingested, do not induce vomiting. Get medical attention, if necessary. **IN CASE OF FIRE:** Use water fog, dry chemical, CO₂, or "alcohol" foam. **IN CASE OF SPILL:** Sweep-up or vacuum spilled material. Place residue in suitable container. Consult Material Safety Data Sheet for additional information.

ADDITIONAL CANADIAN REGULATIONS:

CANADIAN DSL/NDL INVENTORY STATUS: Sodium Dichloro-Isocyanurate Dihydrate is listed on the DSL Inventory.

OTHER CANADIAN REGULATIONS: The labeling and use requirements of the Pest Control Products Act.

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LISTS: Sodium Dichloro-Isocyanurate Dihydrate is not on the CEPA Priorities Substances Lists.

CANADIAN WHMIS SYMBOLS: **Class D2B:** Other Toxic Effects



EUROPEAN UNION INFORMATION:

EUROPEAN UNION INFORMATION FOR PRODUCT: This product meets the definition of a hazardous substance, as defined by the European Community Council Directive 67/548/EEC. The information presented below is pertinent to the product. Caution: this preparation has not been fully tested.

EU LABELING AND CLASSIFICATION:

EU CLASSIFICATION: Harmful. Irritant. [Xn; Xi]

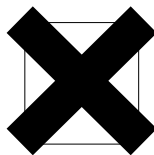
EU RISK PHRASES: Harmful if swallowed. Irritating to the eyes and skin. [R: 22, 36/38].

EU SAFETY PHRASES: Keep out of reach of children. (*This safety phrase can be omitted from the label when the substance or preparation is sold for industrial use only.*) Keep container tightly closed. When using, do not eat or drink. Do not breathe dust. Avoid contact with skin and eyes. Take off immediately all contaminated clothing. After contact with skin, wash immediately with plenty of water. Wear suitable gloves and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label. [S: (2-) 7-20-22/23-24/25-27-28-37/39-45-62]

15. REGULATORY INFORMATION (Continued)

EUROPEAN UNION INFORMATION (continued):

EUROPEAN UNION ANNEX II HAZARD SYMBOL:



EUROPEAN union INFORMATION FOR CONSTITUENTS: The following information is available for primary constituents in the components of this product.

Sodium Dichloro-Isocyanurate Dihydrate:

EC CLASSIFICATION: An official classification for this substance has not been published in Commission Directives 93/72/EEC, 94/69/EC, or 96/54/EC.

AUSTRALIAN INFORMATION FOR PRODUCT:

AUSTRALIAN INVENTORY OF CHEMICAL SUBSTANCES (AICS) STATUS: Sodium Dichloro-Isocyanurate Dihydrate is listed on the AICS.

LIST OF DESIGNATED SUBSTANCES: The following hazard classification data have been selected for this product, based a review of the regulation [NOHSC: 10005 (1994)]:

RISK PHRASES: Harmful if swallowed. Irritating to the eyes and skin. [R: 22, 36/38].

SAFETY PHRASES: Keep out of reach of children*. Keep container tightly closed. When using, do not eat or drink. Do not breathe dust. Avoid contact with skin and eyes. Take off immediately all contaminated clothing. After contact with skin, wash immediately with plenty of water. Wear suitable gloves, and eye/face protection. In case of accident or if you feel unwell, contact a doctor or Poisons Information Centre immediately (show the label where possible). If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label. [S: (2-) 7-20-22/23-24/25-27-28-37/39-45-62]. (*This safety phrase can be omitted from the label when the substance or preparation is sold for industrial use only.)

16. OTHER INFORMATION

PREPARED BY:

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The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. Aqua-Pure International assumes no responsibility for injury to the vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, Aqua-Pure International assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in his use of the material.

DEFINITIONS OF TERMS

A large number of abbreviations and acronyms appear on a MSDS. Some of these which are commonly used include the following:

CAS #: This is the Chemical Abstract Service Number that uniquely identifies each constituent.

EXPOSURE LIMITS IN AIR:

DFG MAK Pregnancy Risk Group Classification: Group A: A risk of damage to the developing embryo or fetus has been unequivocally demonstrated. Exposure of pregnant women can lead to damage of the developing organism, even when MAK and BAT (Biological Tolerance Value for Working Materials) values are observed. **Group B:** Currently available information indicates a risk of damage to the developing embryo or fetus must be considered to be probable. Damage to the developing organism cannot be excluded when pregnant women are exposed, even when MAK and BAT values are observed. **Group C:** There is no reason to fear a risk of damage to the developing embryo or fetus when MAK and BAT values are observed. **Group D:** Classification in one of the groups A-C is not yet possible because, although the data available may indicate a trend, they are not sufficient for final evaluation.

CEILING LEVEL: The concentration that shall not be exceeded during any part of the working exposure.

IDLH-Immediately Dangerous to Life and Health: This level represents a concentration from which one can escape within 30-minutes without suffering escape-preventing or permanent injury.

LOQ: Limit of Quantitation.

MAK: Federal Republic of Germany Maximum Concentration Values in the workplace.

NE: Not Established. When no exposure guidelines are established, an entry of NE is made for reference.

NIC: Notice of Intended Change.

NIOSH CEILING: The exposure that shall not be exceeded during any part of the workday. If instantaneous monitoring is not feasible, the ceiling shall be assumed as a 15-minute TWA exposure (unless otherwise specified) that shall not be exceeded at any time during a workday.

NIOSH RELs: NIOSH's Recommended Exposure Limits.

PEL-Permissible Exposure Limit: OSHA's Permissible Exposure Limits. This exposure value means exactly the same as a TLV, except that it is enforceable by OSHA. The OSHA Permissible Exposure Limits are based in the 1989 PELs and the June, 1993 Air Contaminants Rule (Federal Register: 58: 35338-35351 and 58: 40191). Both the current PELs and the vacated PELs are indicated. The phrase, "Vacated 1989 PEL," is placed next to the PEL that was vacated by Court Order.

SKIN: Used when there is a danger of cutaneous absorption.

STEL-Short Term Exposure Limit: Short Term Exposure Limit, usually a 15-minute time-weighted average (TWA) exposure that should not be exceeded at any time during a workday, even if the 8-hr TWA is within the TLV-TWA, PEL-TWA or REL-TWA.

TLV-Threshold Limit Value: An airborne concentration of a substance that represents conditions under which it is generally believed that nearly all workers may be repeatedly exposed without adverse effect. The duration must be considered, including the 8-hour.

TWA-Time Weighted Average: Time Weighted Average exposure concentration for a conventional 8-hr (TLV, PEL) or up to a 10-hr (REL) workday and a 40-hr workweek.

IDLH-Immediately Dangerous to Life and Health: This level represents a concentration from which one can escape within 30-minutes without suffering escape-preventing or permanent injury.

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM

HAZARD RATINGS: This rating system was developed by the National Paint and Coating Association and has been adopted by industry to identify the degree of chemical hazards.

HEALTH HAZARD:

0 (Minimal Hazard): No significant health risk, irritation of skin or eyes not anticipated. *Skin Irritation:* Essentially non-irritating. PII or Draize = "0". *Eye Irritation:* Essentially non-irritating, or minimal effects which clear in < 24 hours [e.g. mechanical irritation]. Draize = "0". *Oral Toxicity LD₅₀ Rat:* < 5000 mg/kg. *Dermal Toxicity LD₅₀Rat or Rabbit:* < 2000 mg/kg. *Inhalation Toxicity 4-hrs LC₅₀ Rat:* < 20 mg/L.; **1 (Slight Hazard):** Minor reversible injury may occur; slightly or mildly irritating. *Skin Irritation:* Slightly or mildly irritating. *Eye Irritation:* Slightly or mildly irritating. *Oral Toxicity LD₅₀ Rat:* > 500-5000 mg/kg. *Dermal Toxicity LD₅₀Rat or Rabbit:* > 1000-2000 mg/kg. *Inhalation Toxicity LC₅₀ 4-hrs Rat:* > 2-20 mg/L);

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM HAZARD RATINGS (continued):

HEALTH HAZARD (continued):

2 (Moderate Hazard): Temporary or transitory injury may occur. *Skin Irritation:* Moderately irritating; primary irritant; sensitizer. PII or Draize > 0, < 5. *Eye Irritation:* Moderately to severely irritating and/or corrosive; reversible corneal opacity; corneal involvement or irritation clearing in 8-21 days. Draize > 0, ≤ 25. *Oral Toxicity LD₅₀ Rat:* > 50-500 mg/kg. *Dermal Toxicity LD₅₀Rat or Rabbit:* > 200-1000 mg/kg. *Inhalation Toxicity LC₅₀ 4-hrs Rat:* > 0.5-2 mg/L.) **3 (Serious Hazard):** Major injury likely unless prompt action is taken and medical treatment is given; high level of toxicity; corrosive. *Skin Irritation:* Severely irritating and/or corrosive; may destroy dermal tissue, cause skin burns, dermal necrosis. PII or Draize > 5-8 with destruction of tissue. *Eye Irritation:* Corrosive, irreversible destruction of ocular tissue; corneal involvement or irritation persisting for more than 21 days. Draize > 80 with effects irreversible in 21 days. *Oral Toxicity LD₅₀ Rat:* > 1-50 mg/kg. *Dermal Toxicity LD₅₀Rat or Rabbit:* > 20-200 mg/kg. *Inhalation Toxicity LC₅₀ 4-hrs Rat:* > 0.05-0.5 mg/L.); **4 (Severe Hazard):** Life-threatening; major or permanent damage may result from single or repeated exposure. *Skin Irritation:* Not appropriate. Do not rate as a "4", based on skin irritation alone. *Eye Irritation:* Not appropriate. Do not rate as a "4", based on eye irritation alone. *Oral Toxicity LD₅₀ Rat:* ≤ 1 mg/kg. *Dermal Toxicity LD₅₀Rat or Rabbit:* ≤ 20 mg/kg. *Inhalation Toxicity LC₅₀ 4-hrs Rat:* ≤ 0.05 mg/L).

FLAMMABILITY HAZARD:

0 (Minimal Hazard-Materials that will not burn in air when exposure to a temperature of 815.5°C [1500°F] for a period of 5 minutes.); 1 (Slight Hazard-Materials that must be pre-heated before ignition can occur. Material require considerable pre-heating, under all ambient temperature conditions before ignition and combustion can occur, including: Materials that will burn in air when exposed to a temperature of 815.5°C (1500°F) for a period of 5 minutes or less; Liquids, solids and semisolids having a flash point at or above 93.3°C [200°F] (e.g. OSHA Class IIIB, or; Most ordinary combustible materials [e.g. wood, paper, etc.]; 2 (Moderate Hazard-Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur. Materials in this degree would not, under normal conditions, form hazardous atmospheres in air, but under high ambient temperatures or moderate heating may release vapor in sufficient quantities to produce hazardous atmospheres in air, including: Liquids having a flash-point at or above 37.8°C [100°F]; Solid materials in the form of course dusts that may burn rapidly but that generally do not form explosive atmospheres; Solid materials in a fibrous or shredded form that may burn rapidly and create flash fire hazards (e.g. cotton, sisal, hemp; Solids and semisolids that readily give off flammable vapors.); 3 (Serious Hazard- Liquids and solids that can be ignited under almost all ambient temperature conditions. Materials in this degree produce hazardous atmospheres with air under almost all ambient temperatures, or, unaffected by ambient temperature, are readily ignited under almost all conditions, including: Liquids having a flash point below 22.8°C [73°F] and having a boiling point at or above 38°C [100°F] and below 37.8°C [100°F] [e.g. OSHA Class IB and IC]; Materials that on account of their physical form or environmental conditions can form explosive mixtures with air and are readily dispersed in air [e.g., dusts of combustible solids, mists or droplets of flammable liquids]; Materials that burn extremely rapidly, usually by reason of self-contained oxygen [e.g. dry nitrocellulose and many organic peroxides]); 4 (Severe Hazard-Materials that will rapidly or completely vaporize at atmospheric pressure and normal ambient temperature or that are readily dispersed in air, and which will burn readily, including: Flammable gases; Flammable cryogenic materials; Any liquid or gaseous material that is liquid while under pressure and has a flash point below 22.8°C [73°F] and a boiling point below 37.8°C [100°F] [e.g. OSHA Class IA; Material that ignite spontaneously when exposed to air at a temperature of 54.4°C [130°F] or below [e.g. pyrophoric].

PHYSICAL HAZARD:

0 (Water Reactivity): Materials that do not react with water. *Organic Peroxides:* Materials that are normally stable, even under fire conditions and will not react with water. *Explosives:* Substances that are Non-Explosive. *Unstable Compressed Gases:* No Rating. *Pyrophorics:* No Rating. *Oxidizers:* No "0" rating allowed. *Unstable Reactives:* Substances that will not polymerize, decompose, condense or self-react.);

DEFINITIONS OF TERMS (Continued)

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM HAZARD RATINGS (continued):

PHYSICAL HAZARD (continued):

1 (Water Reactivity): Materials that change or decompose upon exposure to moisture. *Organic Peroxides:* Materials that are normally stable, but can become unstable at high temperatures and pressures. These materials may react with water, but will not release energy. *Explosives:* Division 1.5 & 1.6 substances that are very insensitive explosives or that do not have a mass explosion hazard. *Compressed Gases:* Pressure below OSHA definition. *Pyrophorics:* No Rating. *Oxidizers:* Packaging Group III; *Solids:* any material that in either concentration tested, exhibits a mean burning time less than or equal to the mean burning time of a 3:7 potassium bromate/cellulose mixture and the criteria for Packing Group I and II are not met. *Liquids:* any material that exhibits a mean pressure rise time less than or equal to the pressure rise time of a 1:1 nitric acid (65%)/cellulose mixture and the criteria for Packing Group I and II are not met. *Unstable Reactives:* Substances that may decompose, condense or self-react, but only under conditions of high temperature and/or pressure and have little or no potential to cause significant heat generation or explosive hazard. Substances that readily undergo hazardous polymerization in the absence of inhibitors.); **2 (Water Reactivity):** Materials that may react violently with water. *Organic Peroxides:* Materials that, in themselves, are normally unstable and will readily undergo violent chemical change, but will not detonate. These materials may also react violently with water. *Explosives:* Division 1.4 – Explosive substances where the explosive effect are largely confined to the package and no projection of fragments of appreciable size or range are expected. An external fire must not cause virtually instantaneous explosion of almost the entire contents of the package. *Compressed Gases:* Pressurized and meet OSHA definition but < 514.7 psi absolute at 21.1° C (70° F) [500 psig]. *Pyrophorics:* No Rating. *Oxidizers:* Packing Group II *Solids:* any material that, either in concentration tested, exhibits a mean burning time of less than or equal to the mean burning time of a 2:3 potassium bromate/cellulose mixture and the criteria for Packing Group I are not met. *Liquids:* any material that exhibits a mean pressure rise time less than or equal to the pressure rise of a 1:1 aqueous sodium chlorate solution (40%)/cellulose mixture and the criteria for Packing Group I are not met. *Reactives:* Substances that may polymerize, decompose, condense, or self-react at ambient temperature and/or pressure, but have a low potential for significant heat generation or explosion. Substances that readily form peroxides upon exposure to air or oxygen at room temperature); **3 (Water Reactivity):** Materials that may form explosive reactions with water. *Organic Peroxides:* Materials that are capable of detonation or explosive reaction, but require a strong initiating source, or must be heated under confinement before initiation; or materials that react explosively with water. *Explosives:* Division 1.2 – Explosive substances that have a fire hazard and either a minor blast hazard or a minor projection hazard or both, but do not have a mass explosion hazard. *Compressed Gases:* Pressure ≥ 514.7 psi absolute at 21.1° C (70° F) [500 psig]. *Pyrophorics:* No Rating. *Oxidizers:* Packing Group I *Solids:* any material that, in either concentration tested, exhibits a mean burning time less than the mean burning time of a 3.:2 potassium bromate/cellulose mixture. *Liquids:* Any material that spontaneously ignites when mixed with cellulose in a 1:1 ratio, or which exhibits a mean pressure rise time less than the pressure rise time of a 1:1 perchloric acid (50%)/cellulose mixture. *Unstable Reactives:* Substances that may polymerize, decompose, condense or self-react at ambient temperature and/or pressure and have a moderate potential to cause significant heat generation or explosion.); **4 (Water Reactivity):** Materials that react explosively with water without requiring heat or confinement. *Organic Peroxides:* Materials that are readily capable of detonation or explosive decomposition at normal temperature and pressures. *Explosives:* Division 1.1 & 1.2-explosive substances that have a mass explosion hazard or have a projection hazard. A mass explosion is one that affects almost the entire load instantaneously. *Compressed Gases:* No Rating. *Pyrophorics:* Add to the definition of Flammability “4”. *Oxidizers:* No “4” rating. *Unstable Reactives:* Substances that may polymerize, decompose, condense or self-react at ambient temperature and/or pressure and have a high potential to cause significant heat generation or explosion.).

NATIONAL FIRE PROTECTION ASSOCIATION HAZARD RATINGS:

HEALTH HAZARD: **0** (material that on exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials); **1** (materials that on exposure under fire conditions could cause irritation or minor residual injury); **2** (materials that on intense or continued exposure under fire conditions could cause temporary incapacitation or possible residual injury); **3** (materials that can on short exposure could cause serious temporary or residual injury); **4** (materials that under very short exposure could cause death or major residual injury).

FLAMMABILITY HAZARD: **0** Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand. **1** Materials that must be preheated before ignition can occur. Materials in this degree require considerable preheating, under all ambient temperature conditions, before ignition and combustion can occur. **2** Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur. Materials in this degree would not under normal conditions form hazardous atmospheres with air, but under high ambient temperatures or under moderate heating could release vapor in sufficient quantities to produce hazardous atmospheres with air. **3** Liquids and solids that can be ignited under almost all ambient temperature conditions. Materials in this degree produce hazardous atmospheres with air under almost all ambient temperatures or, though unaffected by ambient temperatures, are readily ignited under almost all conditions. **4** Materials that will rapidly or completely vaporize at atmospheric pressure and normal ambient temperature or that are readily dispersed in air and will burn readily.

INSTABILITY HAZARD: **0** Materials that in themselves are normally stable, even under fire conditions. **1** Materials that in themselves are normally stable, but that can become unstable at elevated temperatures and pressures. **2** Materials that readily undergo violent chemical change at elevated temperatures and pressures. **3** Materials that in themselves are capable of detonation or explosive decomposition or explosive reaction, but that require a strong initiating source or that must be heated under confinement before initiation. **4** Materials that in themselves are readily capable of detonation or explosive decomposition or explosive reaction at normal temperatures and pressures.

FLAMMABILITY LIMITS IN AIR:

Much of the information related to fire and explosion is derived from the National Fire Protection Association (NFPA). **Flash Point** - Minimum temperature at which a liquid gives off sufficient vapors to form an ignitable mixture with air. **Autoignition Temperature:** The minimum temperature required to initiate combustion in air with no other source of ignition. **LEL** - the lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source. **UEL** - the highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source.

TOXICOLOGICAL INFORMATION:

Human and Animal Toxicology: Possible health hazards as derived from human data, animal studies, or from the results of studies with similar compounds are presented. Definitions of some terms used in this section are: **LD₅₀** - Lethal Dose (solids & liquids) which kills 50% of the exposed animals; **LC₅₀** - Lethal Concentration (gases) which kills 50% of the exposed animals; **ppm** concentration expressed in parts of material per million parts of air or water; **mg/m³** concentration expressed in weight of substance per volume of air; **mg/kg** quantity of material, by weight, administered to a test subject, based on their body weight in kg. Other measures of toxicity include **TDLo**, the lowest dose to cause a symptom and **TCLo** the lowest concentration to cause a symptom; **TDo**, **LDLo**, and **LDo**, or **TC**, **TCo**, **LCLo**, and **LCo**, the lowest dose (or concentration) to cause lethal or toxic effects. **Cancer Information:** The sources are: **IARC** - the International Agency for Research on Cancer; **NTP** - the National Toxicology Program, **RTECS** - the Registry of Toxic Effects of Chemical Substances, **OSHA** and **CAL/OSHA**. IARC and NTP rate chemicals on a scale of decreasing potential to cause human cancer with rankings from 1 to 4. Subrankings (2A, 2B, etc.) are also used. **Other Information:** **BEI** - ACGIH Biological Exposure Indices, represent the levels of determinants which are most likely to be observed in specimens collected from a healthy worker who has been exposed to chemicals to the same extent as a worker with inhalation exposure to the TLV.

DEFINITIONS OF TERMS (Continued)

ECOLOGICAL INFORMATION:

EC is the effect concentration in water. **BCF** = Bioconcentration Factor, which is used to determine if a substance will concentrate in lifeforms which consume contaminated plant or animal matter. **TL_m** = median threshold limit; Coefficient of Oil/Water Distribution is represented by **log K_{ow}** or **log K_{oc}** and is used to assess a substance's behavior in the environment.

REGULATORY INFORMATION:

U.S. and CANADA:

This section explains the impact of various laws and regulations on the material. **EPA** is the U.S. Environmental Protection Agency. **ACGIH**: American Conference of Governmental Industrial Hygienists, a professional association which establishes exposure limits. **NIOSH** is the National Institute of Occupational Safety and Health, which is the research arm of the U.S. Occupational Safety and Health Administration (**OSHA**). **WHMIS** is the Canadian Workplace Hazardous Materials Information System. **DOT** and **TC** are the U.S. Department of Transportation and the Transport Canada, respectively. Superfund Amendments and Reauthorization Act (**SARA**); the Canadian Domestic/Non-Domestic Substances List (**DSL/NDSL**); the U.S. Toxic Substance Control Act (**TSCA**); Marine Pollutant status according to the **DOT**; the Comprehensive Environmental Response, Compensation, and Liability Act (**CERCLA** or **Superfund**); and various state regulations. This section also includes information on the precautionary warnings which appear on the material's package label. **OSHA** - U.S. Occupational Safety and Health Administration.

REGULATORY INFORMATION (Continued):

EUROPEAN: **EC** is the European Community (formerly known as the **EEC**, European Economic Community). **EINECS**: This the European Inventory of Now-Existing Chemical Substances. The **ARD** is the European Agreement Concerning the International Carriage of Dangerous Goods by Road and the **RID** are the International Regulations Concerning the Carriage of Dangerous Goods by Rail. **AUSTRALIAN**: **AICS** is the Australian Inventory of Chemical Substances. **NOHSC**: **NATIONAL OCCUPATIONAL HEALTH & SAFETY CODE**.