MATERIAL SAFETY DATA SHEET

Prepared to U.S. OSHA, CMA, ANSI, Canadian WHMIS Standards and European Union Directives

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

1. PRODUCT IDENTIFICATION

TRADE NAME (AS LABELED):	**STARBRITE TEAK CLEANER**
SYNONYMS:	**TEAK CLEANER**
CHEMICAL NAME/CLASS:	Bleach/Lye Solution
PART NUMBER:	81416, 81432, 81400
PRODUCT USE:	Teak Care
MANUFACTURER'S NAME:	**STAR BRITE**
U.S. ADDRESS:	4041 S.W. 47 Avenue Ft. Lauderdale, FL 33314
U.S. EMERGENCY PHONE:	Chemtrec (800) 424-9300 or (703) 527-3887
U.S. INFORMATION PHONE:	(954) 587-6280
INTERNATIONAL ADDRESS:	
INTERNATIONAL EMERGENCY PHONE:	
INTERNATIONAL BUSINESS PHONE:	
BUSINESS PHONE:	800-327-8583
DATE OF PREPARATION:	May 6, 2003
DATE OF REVISION:	June 18, 2005

2. COMPOSITION and INFORMATION ON INGREDIENTS

EU LABELING AND CLASSIFICATION: This product meets the definition of the hazard class of Irritant, as defined by the European Economic Community Guidelines.

EU CLASSIFICATION: [Xi] Irritating. [N]: Dangerous for the Environment

EU RISK PHRASES: [R: 36/37/38]: Irritating to eyes, skin and respiratory system. [R: 51]: Toxic to aquatic organisms.

EU SAFETY PHRASES: [S: 1/2]: Keep out of the reach of children. *(This safety phrase can be omitted from the label when the substance or preparation is sold for industrial use only).* [S: 22]: In case of contact with eyes, rinse immediately with plenty of water. [S: 45]: In case of accident, or if you feel unwell, seek medical advice immediately (show label where possible).

CHEMICAL NAME	CAS #	EINECS #	% w/v	EU CLASSIFICATION FOR COMPONENTS
Alcohol Ethoxylate	68439-46-3	Unlisted	1-4%	HAZARD CLASSIFICATION: Not Applicable RISK PHRASES: Not Applicable
Proprietary Acrylic Polymer Mixture			1-4%	HAZARD CLASSIFICATION: Not Applicable RISK PHRASES: Not Applicable
Proprietary Phosphoric Acid Ester			1-4%	HAZARD CLASSIFICATION: Not Applicable RISK PHRASES: Not Applicable
Sodium Hydroxide	1310-73-2	215-185-5	1-4%	HAZARD CLASSIFICATION: C (Corrosive) RISK PHRASES: R: 35
Sodium Hypochlorite	7681-52-9	231-668-3	5-10%	HAZARD CLASSIFICATION: C (Corrosive); N (Dangerous for the Environment) RISK PHRASES: R: 31; R: 35; R: 50
Water	7732-18-5	231-791-2	Balance	HAZARD CLASSIFICATION: Not Applicable RISK PHRASES: Not Applicable

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

NOTE: ALL Canadian WHMIS required information is included in appropriate sections based on the ANSI Z400.1-1998 format. This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR. The MSDS is also prepared to include all European Union required information under EU Directives.

3. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW: Product Description: This product is a clear, colorless liquid with a chlorine odor. **Health Hazards:** The main hazard associated with overexposure to this product is the potential for moderate irritation of eyes, skin, and other contaminated tissue. **Flammability Hazards:** If involved in a fire, this product will produce of sodium oxides and hydrogen chloride. **Reactivity Hazards:** This product is not reactive. **Environmental Hazards:** This can be harmful or fatal to contaminated plant, animal, and aquatic life. **Emergency Recommendations:** Emergency responders must wear the personal protective equipment suitable for the situation to which they are responding.

3. HAZARD IDENTIFICATION (Continued)

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 are described on the following page.

INHALATION: Inhalation of high concentrations of vapors, mists, or sprays of this product may moderately irritate the respiratory system. Symptoms of inhalation overexposure can include coughing, discomfort, sore throat, and difficulty breathing. Chronic inhalation of this product may cause chronic inflammation of upper respiratory tract or bronchitis.

CONTACT WITH SKIN or EYES: Skin contact can cause moderate irritation, depending on the duration and concentration of exposure. Symptoms of such overexposure may include redness, dryness, and itching. Repeated skin contact with this product may cause dermatitis (dry, red skin). Eye contact with this product can irritate contaminated eyes. Symptoms of eye contact can include pain, redness, and tearing. Prolonged eye contact may cause temporary tissue damage.

SKIN ABSORPTION: The components of this product are not known to be absorbed through intact skin.

INGESTION: Ingestion is not anticipated to be a significant route of exposure for any component of this product. If this product is swallowed, it may cause nausea, vomiting, diarrhea, and abdominal discomfort.

INJECTION: Injection of this product (as may occur if skin is punctured by a contaminated object) may cause pain, redness, and local swelling.

HEALTH EFFECTS OR RISKS FROM EXPOSURE: An Explanation in **Lay Terms**. In the event of overexposure, the following symptoms may be observed:

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM

HEALTH HAZARD	(BLUE)	2
FLAMMABILITY HAZARD	(RED)	0
PHYSICAL HAZARD	(ORANGE)	0

PROTECTIVE EQUIPMENT

EYES	RESPIRATORY	HANDS	BODY
	SEE SECTION 8		SEE SECTION 8

For Routine Industrial Use and Handling Applications

See Section 16 for Definition of Ratings

ACUTE: The primary acute health effect associated with this product is the potential for moderate irritation of contaminated eyes, skin, or other contaminated tissue. Ingestion overexposure may cause nausea, vomiting, diarrhea, and abdominal discomfort.

CHRONIC: Chronic inhalation of this product may cause chronic inflammation of upper respiratory tract or bronchitis. Repeated skin contact with this product may cause dermatitis (dry, red skin). See Section 11 (Toxicology Information) for additional data.

TARGET ORGANS: ACUTE: Skin, eyes, central nervous system. CHRONIC: Skin.

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

4. FIRST-AID MEASURES

Contaminated individuals must be taken for medical attention. Rescuers should be taken for medical attention if necessary. Take a copy of label and MSDS to health professional with the contaminated individual.

SKIN EXPOSURE: If this product contaminates the skin, immediately begin decontamination with running water. Minimum flushing is for 15 minutes. Remove exposed or contaminated clothing, taking care not to contaminate eyes. The contaminated individual must seek immediate medical attention if any adverse health effect occurs.

EYE EXPOSURE: If this product's liquid or vapors enter the eyes, open the contaminated individual's eyes while under gently running water. Use sufficient force to open eyelids. Have the contaminated individual "roll" eyes. Minimum flushing is for 15 minutes. The contaminated individual must seek immediate medical attention.

INHALATION: If vapors, mists, or sprays of this product are inhaled, remove the contaminated individual to fresh air. If necessary, use artificial respiration to support vital functions. Remove or cover gross contamination to avoid exposure to rescuers.

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. Have victim rinse mouth with water if conscious. Never induce vomiting or give a diluent (e.g., water) to someone who is unconscious, having convulsions, or unable to swallow. If vomiting occurs, lean patient forward or place on left side (head-down position if possible) to maintain an open airway and prevent aspiration.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Preexisting dermatitis or other skin disorders may be aggravated by exposure to this product.

RECOMMENDATIONS TO PHYSICIANS: Treat symptoms and eliminate overexposure.

5. FIRE-FIGHTING MEASURES

FLASH POINT: Not applicable.
AUTOIGNITION TEMPERATURE: Not determined.
FLAMMABLE LIMITS (in air by volume, %):
Lower (LEL): Not applicable.
Upper (UEL): Not applicable.

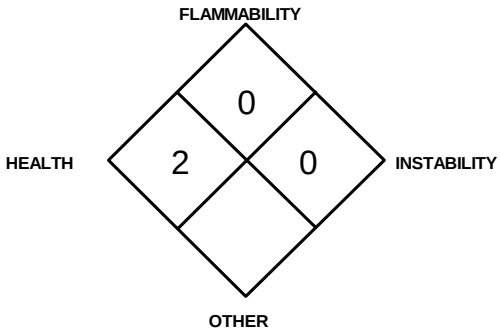
FIRE EXTINGUISHING MATERIALS:

Water Spray: YES	Carbon Dioxide: YES
Foam: YES	Dry Chemical: YES
Halon: YES	Other: Any "ABC" Class.

UNUSUAL FIRE AND EXPLOSION HAZARDS: This product is irritating and presents a moderate contact hazard to firefighters. When involved in a fire, this material may decompose and produce irritating vapors and toxic gases (e.g., sodium oxides and hydrogen chloride).

Explosion Sensitivity to Mechanical Impact: Not sensitive.
Explosion Sensitivity to Static Discharge: Not sensitive.

NFPA RATING



See Section 16 for Definition of Ratings

SPECIAL FIRE-FIGHTING PROCEDURES: Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas. If necessary, rinse contaminated fire response equipment thoroughly with water before returning such equipment to service.

6. ACCIDENTAL RELEASE MEASURES

RELEASE RESPONSE: In case of a release, clear the affected area and protect people. Appropriately trained personnel in proper personal protective equipment, using pre-planned procedures should respond to uncontrolled releases. The proper personal protective equipment for incidental releases (e.g., 32-ounce container) should be rubber gloves and goggles. In the event that a cleanup will generate excessive splashes, goggles, boots, and chemical resistant body protection should also be worn. In the event of a non-incidental release (e.g., several 1-gallon containers released in a poorly ventilated area), minimum Personal Protective Equipment should be Level B: triple-gloves (rubber gloves and nitrile gloves over latex gloves), chemical resistant suit and boots, hard hat, and Self-Contained Breathing Apparatus. Absorb spilled liquid with polypads or other suitable absorbent materials. Decontaminate the area thoroughly. Place all spill residue in an appropriate container and seal. Dispose of in accordance with U.S. Federal, State, and local hazardous waste disposal regulations and those of Canada and its Provinces and EU Member States (see Section 13, Disposal Considerations).

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

7. HANDLING and STORAGE

WORK PRACTICES AND HYGIENE PRACTICES: As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash thoroughly after handling this product. Do not eat, drink, smoke, or apply cosmetics while handling this product. Avoid breathing vapors or mists generated by this product. Use in a well-ventilated location. Remove contaminated clothing immediately.

STORAGE AND HANDLING PRACTICES: All employees who handle this material should be trained to handle it safely. Open containers slowly on a stable surface. Empty containers may contain residual amounts of this product; therefore, empty containers should be handled with care. Store containers in a cool, dry location, away from direct sunlight, sources of intense heat, or where freezing is possible. Store away from incompatible materials (see Section 10, Stability and Reactivity). Material should be stored in secondary containers. Keep container tightly closed when not in use. Inspect all incoming containers before storage to ensure containers are properly labeled and not damaged.

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 and those of Canada and its Provinces and those of 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/GUIDELINES:

CHEMICAL NAME	CAS #	EXPOSURE LIMITS IN AIR									
		ACGIH-TLVs		OSHA-PELs		NIOSH-RELs		NIOSH	AIHA WEELs		OTHER
		TWA mg/m^3	STEL mg/m^3	TWA mg/m^3	STEL mg/m^3	TWA mg/m^3	STEL mg/m^3	IDLH mg/m^3	TWA mg/m^3	STEL mg/m^3	mg/m^3
Sodium Hypochlorite	7681-52-9	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Sodium Hydroxide	1310-73-2	NE	2 ceiling	NE	2 2 ceiling (vacated 1989 PEL)	NE	NE	NE	NE	NE	NIOSH REL: STEL = 2 (ceiling)
Water	7732-18-5	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE

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

INTERNATIONAL OCCUPATIONAL EXPOSURE LIMITS: In addition to the exposure limit values cited above, other exposure limits have been established by various countries for the components of this mixture, as provided below (no listing for a component indicates no values are available):

SODIUM HYDROXIDE:
Australia: TWA = 2 mg/m3, JAN 1993
Austria: MAK = 2 mg/m3, JAN 1999
Belgium: STEL = 2 mg/m3, JAN 1993
Denmark: TWA = 2 mg/m3, JAN 1999
Finland: TWA = 2 mg/m3, JAN 1999
Germany: MAK = 2 mg/m3, JAN 199
Japan: OEL(C) = 2 mg/m3, JAN 1999
The Netherlands: MAC-TGG = 2 mg/m3, JAN 1999

SODIUM HYDROXIDE (continued):
Norway: TWA = 2 mg/m3, JAN 1999
The Philippines: TWA = 2 mg/m3, JAN 1993
Sweden: TGV = 2 mg/m3, JAN 1999
Switzerland: MAK-W = 2 mg/m3, KZG-W = 4 mg/m3, JAN 1999
Thailand: TWA = 2 mg/m3, JAN 1993
Turkey: TWA = 2 mg/m3, JAN 1993
United Kingdom: STEL 2 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 above, if applicable. If respiratory protection is needed, use only protection authorized in the U.S. Federal OSHA Standard (29 CFR 1910.134), applicable U.S. State regulations, the Canadian CSA Standard Z94.4-93, the European Standard EN149, or Standards of EU 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 OSHAs Respiratory Protection Standard (1910.134-1998). The following are NIOSH respiratory protection equipment guidelines for the Sodium Hydroxide component.

SODIUM HYDROXIDE

CONCENTRATION	**RESPIRATORY PROTECTION**
UP TO 10 mg/m3:	Any Supplied-Air Respirator (SAR) operated in a continuous-flow mode, or any Air-Purifying, Full-Facepiece Respirator with a high-efficiency particulate filter, or any Powered, Air-Purifying Respirator (PAPR) with a dust and mist filter, or any Self-Contained Breathing Apparatus (SCBA) with a full facepiece, or any SAR with a full facepiece.
Emergency or Planned Entry Into Unknown Concentrations or IDLH Conditions:	Any SCBA that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode, or any SAR that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary SCBA operated in pressure-demand or other positive-pressure mode.
Escape:	Any Air-Purifying, Full-Facepiece Respirator with a high-efficiency particulate filter, or any appropriate escape-type, SCBA.

EYE PROTECTION: Splash goggles or safety glasses. Face-shields should be worn if operations will generate splashes or sprays. If necessary, refer to U.S. OSHA 29 CFR 1910.133, Canadian Standards, or the European Standard EN166.

HAND PROTECTION: Wear Nitrile rubber, Polyethylene, Viton ™ gloves (resistance to breakthrough longer than 8 hours when tested against a similar petroleum substance) for routine industrial use. Natural rubber and butyl rubber gloves are not recommended. Resistance of specific materials can vary from product to product. Evaluate resistance under conditions of use and maintain clothing carefully. 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, appropriate Standards of Canada, or appropriate Standards of the European Union.

BODY PROTECTION: If operations will generate splashes or sprays, use body protection appropriate for task (e.g., coveralls or apron). If necessary, refer to appropriate Standards of Canada or the European Union. 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 determined.
EVAPORATION RATE (n-BuAc = 1): Similar to water.
SPECIFIC GRAVITY (water = 1): 1.02
MELTING/FREEZING POINT: Not determined.
SOLUBILITY IN WATER: Completely soluble.
BOILING POINT: 100°C (212°F)
VAPOR PRESSURE, mm Hg @ 20°C (68°F): Not determined.
pH: Not determined.
ODOR THRESHOLD: Not determined.
COEFFICIENT OF OIL/WATER DISTRIBUTION (PARTITION COEFFICIENT): Not available.
APPEARANCE, ODOR and COLOR: This product is a clear, colorless liquid with a chlorine odor.
HOW TO DETECT THIS SUBSTANCE (warning properties): The odor may act as a distinguishing characteristic.

10. STABILITY and REACTIVITY

STABILITY: Normally stable.
DECOMPOSITION PRODUCTS: Thermal decomposition may produce irritating vapors and toxic gases (e.g., sodium oxides and hydrogen chlorides).
MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: This product is not compatible with amines, ammonium acetate, ammonium carbonate, ammonium nitrate, ammonium oxalate, ammonium phosphate, cellulose, and ethyleneimine, strong acids, reducing agents, amines, and ammonia salts.
HAZARDOUS POLYMERIZATION: Will not occur.
CONDITIONS TO AVOID: Avoid exposure to or contact with extreme temperatures and incompatible chemicals.

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

11. TOXICOLOGICAL INFORMATION

TOXICITY DATA: The specific toxicology data available for components greater than 1% in concentration are as follows.

ALCOHOL, C9-11, ETHOXYLATED:

LD_{50} (Oral-Rat) 1378 mg/kg: Behavioral: somnolence (general depressed activity), ataxia; Gastrointestinal: hypermotility, diarrhea

LD_{50} (Skin-Rat) > 2 gm/kg: Behavioral: somnolence (general depressed activity), ataxia; Gastrointestinal: hypermotility, diarrhea

TDLo (Skin-Rat) 1950 mg/kg/13 weeks-intermittent: Nutritional and Gross Metabolic: weight loss or decreased weight gain, changes in phosphorus, changes in potassium

SODIUM HYDROXIDE:

Eye Irritancy (monkey) = 1%/24 hours; severe
Skin Irritancy (rabbit) = 500 mg/24 hours; severe
Eye Irritancy (rabbit) = 400 µg; mild
Eye Irritancy (rabbit) = 1%; severe
Eye Irritancy (rabbit) = 50 µg/24 hours; severe
Eye Irritancy (rabbit) = 1 mg/24 hours; severe
Eye Irritancy (rabbit) = 1 mg/30 seconds/rinsed; severe
LD_{50} (intraperitoneal, mouse) = 40 mg/kg
LDLo (oral, rabbit) = 500 mg/kg
Cytogenetic Analysis (parenteral, grasshopper) = 20 mg
Cytogenetic Analysis (lung, hamster) = 10 mmol/L
Cytogenetic Analysis (hamster) = 16 mmol/L

PROPRIETARY ACRYLIC POLYMER MIXTURE

LD_{50} (Oral-Rat) > 5000 mg/kg:
LD_{50} (Skin-Rabbit) > 5000 mg/kg:

SODIUM HYPOCHLORITE:

Standard Draize (Skin-Human) 4%/48 hours
Standard Draize (Eye-Rabbit) 10 mg Moderate
Standard Draize (Eye-Rabbit) 1.31 mg Mild
TDLo (Oral-Woman) 1 gm/kg: Behavioral: somnolence (general depressed activity); Vascular: BP lowering not characterized in autonomic section; Skin and Appendages: corrosive (after topical exposure)
LD_{50} (Oral-mouse 5800 mg/kg: Behavioral: changes in motor activity (specific assay); Gastrointestinal: other changes
TDLo (Intravenous-Man) 45 mg/kg: Lungs, Thorax, or Respiration: other changes; Gastrointestinal: nausea or vomiting
TDLo (Intraperitoneal-Rat) 65.12 µg/kg: Lungs, Thorax, or Respiration: respiratory depression; Skin and Appendages: cutaneous sensitization, experimental (after topical exposure); Biochemical: Enzyme inhibition, induction, or change in blood or tissue levels: phosphatases
TDLo (Oral-Rat) 140 mg/kg/9 weeks-continuous: Endocrine: changes in spleen weight; Immunological Including Allergic: decrease in cellular immune response; Biochemical: Metabolism (Intermediary): lipids including transport
TDLo (Intraperitoneal-Rat) 47.96 mg/kg/11 days-intermittent: Blood: tumors: Immunological Including Allergic: autoimmune

SODIUM HYPOCHLORITE (continued):

TDLo (Intraperitoneal-Rat) 26.05 mg/kg/7 days-intermittent: Blood: tumors; Immunological Including Allergic: autoimmune
TDLo (Intraperitoneal-Rat) 26.05 mg/kg/9 days-intermittent: Blood: tumors; Immunological Including Allergic: autoimmune
Mutation in Microorganisms (Bacteria-*Salmonella typhimurium*) 1 mg/plate
DNA Repair (Bacteria-*Escherichia coli*) 20 µg/disc
DNA Damage (Bacteria-*Escherichia coli*) 420 µmol/L
DNA Damage (Non-Mammalian Species-Cells-Not Otherwise Specified) 10 mg/L/1n hour
DNA Damage (Multiple Routes Fish-Not Otherwise Specified) 1.24 mg/L/3 hours
Phage Inhibition Capacity (Bacteria-*Escherichia coli*) 103 µg/well
Micronucleus Test (Multiple Routes-Non-Mammalian Species) 200 ppb
Micronucleus Test (Multiple Routes-Fish-Not Otherwise Specified) 0.55 mg/L/20 days-continuous
Cytogenetic Analysis (Multiple Routes-Non-Mammalian Species) 120 µg/L
Cytogenetic Analysis (Human-Lymphocyte) 100 ppm/24 hours
Cytogenetic Analysis (Hamster-Lung) 100 mg/L
Sister Chromatid Exchange (Human-Embryo) 149 mg/L

SUSPECTED CANCER AGENT: The components of this product are not found on the following lists: FEDERAL OSHA Z LIST, NTP, IARC, and CAL/OSHA and therefore are neither considered to be nor suspected to be cancer-causing agents by these agencies.
IRRITANCY OF PRODUCT: This product can moderately irritate eyes, skin, and other contaminated tissue.
SENSITIZATION TO THE PRODUCT: The components of this product are not known to be skin or respiratory sensitizers.
REPRODUCTIVE TOXICITY INFORMATION: Listed below is information concerning the effects of this product and its components on the human reproductive system.

Mutagenicity: The components of this product are not reported to cause mutagenic effects in humans. Animal mutation data are available for the Sodium Hydroxide component of this product; these data were obtained during clinical studies on specific animal tissues exposed to high doses of this compound.

11. TOXICOLOGICAL INFORMATION (Continued)

REPRODUCTIVE TOXICITY INFORMATION (continued):

Embryotoxicity: The components of this product are not reported to cause embryotoxic effects in humans.

Teratogenicity: The components of this product are not reported to cause teratogenic effects in humans.

Reproductive Toxicity: The components of this product are not reported to cause adverse reproductive effects in humans.

A mutagen is a chemical that causes permanent changes to genetic material (DNA) such that the changes will propagate through generational lines. An embryotoxin is a chemical that 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 that causes damage to a developing fetus, but the damage does not propagate across generational lines. A reproductive toxin is any substance that interferes in any way with the reproductive process.

BIOLOGICAL EXPOSURE INDICES: Currently, there are no Biological Exposure Indices (BEIs) determined for the components of this product.

12. ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

ENVIRONMENTAL STABILITY: The components of this product are relatively stable under ambient, environmental conditions. Additional environmental data are available for components of this product, as follows:

SODIUM HYDROXIDE:
Water solubility = 9 g/0.9 mL water. BOD: None.
Octanol/Water Partition Coefficient: SRP4: Too low to be measured (or possibly virtually 0)
Persistence: Can persist for extended periods of time.

EFFECT OF MATERIAL ON PLANTS or ANIMALS: This product may be harmful or fatal to contaminated plant and animal life (especially if large quantities are released).

EFFECT OF CHEMICAL ON AQUATIC LIFE: This solution is designed to be toxic to certain forms of marine life; High concentrations of this solution may be detrimental to any aquatic environment. The following ecotoxicity data are available for the components of this product.

SODIUM HYDROXIDE:
Acute Hazard Level:
Lethal pH (goldfish) = 10.9
Lethal pH (bluegill) = 10.5

SODIUM HYDROXIDE (continued):
LC_{100} (*Cyprimus carpio)* 24 hours = 180 ppm/ 25°C
TL_m (mosquito fish) 96 hours = 125 ppm/ fresh water
TL_m (bluegill) 48 hours = 99 mg/L/ tap water

13. DISPOSAL CONSIDERATIONS

PREPARING WASTES FOR DISPOSAL: Waste disposal must be in accordance with appropriate Federal, State, and local regulations. 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.

EPA WASTE NUMBER: Not applicable to wastes consisting only of this product.

14. TRANSPORTATION INFORMATION

Call for information.

15. REGULATORY INFORMATION

ADDITIONAL U.S. REGULATIONS:

U.S. SARA REPORTING REQUIREMENTS: The components of this product are not subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act.

CHEMICAL NAME	SARA 302 (40 CFR 355, Appendix A)	SARA 304 (40 CFR Table 302.4)	SARA 313 (40 CFR 372.65)
Sodium Hydroxide	No	Yes	No
Sodium Hypochlorite	No	Yes	No

U.S. SARA THRESHOLD PLANNING QUANTITY: There are no specific Threshold Planning Quantities for any component of this product. The default Federal MSDS submission and inventory requirement filing threshold of 10,000 lbs. (4,540 kg) therefore applies, per 40 CFR 370.20.

U.S. CERCLA REPORTABLE QUANTITY (RQ): Sodium Hydroxide = 1000 lb (454 kg); Sodium Hypochlorite = 100 lb (45.4 kg).

U.S. TSCA INVENTORY STATUS: The components of this product are listed on the TSCA Inventory.

OTHER U.S. FEDERAL REGULATIONS: Not applicable.

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65): No component of this product is on the California Proposition 65 lists.

LABELING (Precautionary Statements) ANSI LABELING (Z129.1): **CAUTION!** MODERATELY IRRITATES SKIN, EYES, AND RESPIRATORY TRACT. Avoid contact with skin or eyes. Avoid breathing vapors or mists. Do not taste or swallow. Wash thoroughly after handling. Wear gloves and goggles. Wear appropriate body protection and face-shield if operations

15. REGULATORY INFORMATION (continued)

will involve splashes or sprays. **FIRST-AID:** In case of contact with skin or eyes, flush immediately with plenty of water for at least 15 minutes. If inhaled, remove to fresh air. If ingested, do not induce vomiting. Get medical attention. **IN CASE OF FIRE:** Use water fog, dry chemical, CO_2, or "alcohol" foam. **IN CASE OF SPILL:** Absorb spill with inert material and place in suitable container. Consult Material Safety Data Sheet for additional information.

ADDITIONAL CANADIAN REGULATIONS:

CANADIAN DSL/NDSL INVENTORY STATUS: The components of this product are listed on the DSL Inventory.

OTHER CANADIAN REGULATIONS: Not applicable.

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LISTS: The components of this product are not on the CEPA Priority Substances Lists.

CANADIAN WHMIS CLASSIFICATION and SYMBOLS: Not applicable.

EUROPEAN UNION INFORMATION FOR PRODUCT:

EU LABELING AND CLASSIFICATION: This product meets the following definitions, per the European Union Council Directives.

EU CLASSIFICATION: [Xi] Irritating. [N]: Dangerous for the Environment

EU RISK PHRASES: [R: 36/37/38]: Irritating to eyes, skin and respiratory system. [R: 51]: Toxic to aquatic organisms.

EU SAFETY PHRASES: [S: 1/2]: Keep out of the reach of children. *(This safety phrase can be omitted from the label when the substance or preparation is sold for industrial use only).* [S: 22]: In case of contact with eyes, rinse immediately with plenty of water. [S: 45]: In case of accident, or if you feel unwell, seek medical advice immediately (show label where possible).

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.

Alcohol Ethoxylate:

EU EINECS/ELINCS NUMBER: Unlisted

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

Sodium Hydroxide:

EU EINECS/ELINCS NUMBER: 215-185-5

EU CLASSIFICATION: [C]: Corrosive

EU RISK PHRASES: [R: 35]: Causes severe burns.

EU SAFETY PHRASES: [S: 1/2-]: Keep out of the reach of children. *(This safety phrase can be omitted from the label when the substance or preparation is sold for industrial use only).* [S: 26]: In case of contact with eyes, rinse immediately with plenty of water and see medical advice. [S: 37/39]: Wear suitable gloves and eye/face protection. [S: 45]: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

EUROPEAN UNION INFORMATION FOR CONSTITUENTS (continued):

Sodium Hypochlorite:

EU EINECS/ELINCS NUMBER: 231-668-3

EU CLASSIFICATION: [C]: Corrosive; [N]: Dangerous for the Environment

EU RISK PHRASES: [R: 31]: Contact with acids liberates toxic gas. [R: 34]: Causes severe burns. [R: 50]: Very toxic to aquatic organisms.

EU SAFETY PHRASES: [S: 1/2-]: Keep out of the reach of children. *(This safety phrase can be omitted from the label when the substance or preparation is sold for industrial use only).* [S: 28]: After contact with skin, rinse immediately with plenty of water and see medical advice. [S: 45]: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). [S: 50]: Do not mix with acids. [S: 61]: Avoid release to the environment. Refer to special instructions/Safety data sheets.

16. OTHER INFORMATION

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DATE OF PRINTING: September 19, 2005

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:

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

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 a there is a danger of cutaneous absorption.

EXPOSURE LIMITS IN AIR (continued):

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: **Ti**me 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.

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM HAZARD RATINGS (continued):

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 LD_{50} Rat*: < 5000 mg/kg. *Dermal Toxicity LD_{50}Rat or Rabbit*: < 2000 mg/kg. *Inhalation Toxicity 4-hrs LC_{50} 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 LD_{50} Rat*: > 500-5000 mg/kg. *Dermal Toxicity LD_{50}Rat or Rabbit*: > 1000-2000 mg/kg. *Inhalation Toxicity LC_{50}* 4-hrs *Rat*: > 2-20 mg/L); **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 LD_{50} Rat*: > 50-500 mg/kg. *Dermal Toxicity LD_{50}Rat or Rabbit*: > 200-1000 mg/kg. *Inhalation Toxicity LC_{50} 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 LD_{50} Rat*: > 1-50 mg/kg. *Dermal Toxicity LD_{50}Rat or Rabbit*: > 20-200 mg/kg. *Inhalation Toxicity LC_{50} 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 LD_{50} Rat*: ≤ 1 mg/kg. *Dermal Toxicity LD_{50}Rat or Rabbit*: ≤ 20 mg/kg. *Inhalation Toxicity LC_{50} 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.];

DEFINITIONS OF TERMS (Continued)

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM HAZARD RATINGS (continued):

FLAMMABILITY HAZARD (continued):

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.); **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.

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM HAZARD RATINGS (continued):

2 (continued): *Unstable 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.

DEFINITIONS OF TERMS (Continued)

FLAMMABILITY LIMITS IN AIR: Much of the information related to fire and explosion is derived from the **N**ational **F**ire **P**rotection **A**ssociation (**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.

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.

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: **LD_{50}** - Lethal Dose (solids & liquids) which kills 50% of the exposed animals; **LC_{50}** - 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/m^3** 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.

REGULATORY INFORMATION:

U.S. and CANADA:

ACGIH: American Conference of Governmental Industrial Hygienists, a professional association which establishes exposure limits.

This section explains the impact of various laws and regulations on the material. **EPA** is the U.S. Environmental Protection Agency. **NIOSH** is the National Institute of Occupational Safety and Health, which is the research arm of the U.S. **O**ccupational **S**afety and **H**ealth **A**dministration (**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.

EUROPEAN and INTERNATIONAL:

The DFG: This is the Federal Republic of Germany's Occupation Health Agency, similar to the U.S. OSHA. **EU** is the European Union (formerly known as the **EEC,** European Economic Community). **EINECS:** This is 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. **AICS** is the Australian Inventory of Chemical Substances. **MITI** is the Japanese Minister of International Trade and Industry