

MATERIAL SAFETY DATA SHEET

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

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

1. PRODUCT IDENTIFICATION

TRADE NAME (AS LABELED): **ELECTROBRITE 4000-B**

CHEMICAL NAME/CLASS: Sodium Hydroxide Solution

PRODUCT CODE NUMBER: 4092

PRODUCT USE: Printed Wiring Board Chemistry

SUPPLIER/MANUFACTURER'S NAME: **ELECTROCHEMICALS, Inc.**

ADDRESS: 5630 Pioneer Creek Drive
Maple Plain MN 55359

EMERGENCY PHONE: 1-800-424-9300 (**CHEMTREC**)

BUSINESS PHONE: 763-479-2008

DATE OF REVISION: December 4, 2006

2. COMPOSITION and INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS #	% w/w	EXPOSURE LIMITS IN AIR					
			ACGIH		OSHA			OTHER mg/m ³
			TLV mg/m ³	STEL mg/m ³	PEL mg/m ³	STEL mg/m ³	IDLH mg/m ³	
Sodium Hydroxide	1310-73-2	20-30	NE	2 (C)	2	2 (C) (Vacated 1989 PEL)	10	NIOSH REL = 2 DFG MAK = 2
Water and other low hazard constituents. The other low hazard constituents are each present in less than 1 percent concentration.		Balance	NE	NE	NE	NE	NE	NE

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

NOTE: All WHMIS required information is included. It is located in appropriate sections based on the ANSI Z400.1-1993 format

3. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW: This colorless solution is corrosive, and can irritate, redden, and burn contaminated tissue. Ingestion of large quantities can be fatal. In the event of fire or spill, adequate precautions must be taken. If involved in a fire, this product may decompose to produce sodium oxides. Emergency responders must wear the proper personal protective equipment suitable for the situation to which they are responding.

SYMPTOMS OF OVER-EXPOSURE BY ROUTE OF EXPOSURE: The most significant routes of occupational over-exposure are inhalation and contact with skin and eyes. The symptoms of over-exposure to this product are as follows:

INHALATION: If mists or sprays of this product are inhaled, they may irritate the nose, throat, and lungs. Depending on the duration of over-exposure, damage to the tissues of the respiratory system may occur. Pulmonary edema, chemical pneumonitis, and other adverse health effects (which may be fatal) may occur after severe inhalation over-exposures to sprays or mists of this product.

CONTACT WITH SKIN or EYES: Contact with the eyes will cause irritation, pain, and reddening. Depending on the duration of over-exposure, eye contamination can result in blindness. Skin contact may result in a "soapy" feel and cause reddening, discomfort, and irritation. Depending on the duration of over-exposure, this product can cause ulcerating burns which could leave scars.

SKIN ABSORPTION: Skin absorption is not anticipated to be a likely route of exposure to any of the components of this product.




INGESTION: Ingestion is not anticipated to be a likely route of occupational exposure to this product. If ingestion does occur burning and irritation of the mouth, throat, esophagus, and other tissues of the digestive system will occur immediately upon contact. Ingestion of large quantities may be fatal.

INJECTION: Accidental injection of this product, via laceration or puncture by a contaminated object may cause pain and irritation in addition to the wound.

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

ACUTE: This product is corrosive and can be severely irritating and damaging to eyes, skin, mucous membranes, and any other exposed tissue. Skin contact can cause chemical burns, blisters, and cars; eye contact may cause blindness. If inhaled, irritation of the respiratory system may occur, with coughing, and difficulty breathing. Severe over-exposures by inhalation and ingestion may be fatal.

CHRONIC: Persistent irritation and dermatitis (reddening and inflammation of the skin) may result from repeated exposures to this product.

HAZARDOUS MATERIAL INFORMATION SYSTEM			
HEALTH		(BLUE)	3
FLAMMABILITY		(RED)	0
REACTIVITY		(YELLOW)	1
PROTECTIVE EQUIPMENT			D
EYES	RESPIRATORY	HANDS	BODY
	SEE SECTION 8		
For routine industrial applications			

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

4. FIRST-AID MEASURES

SKIN EXPOSURE: If the product contaminates the skin, immediately begin decontamination with running water. Minimum flushing is for 15 minutes. Do not interrupt flushing. Remove exposed or contaminated clothing, taking care not to contaminate eyes. Victim must seek immediate medical attention.

EYE EXPOSURE: If this product's liquid or vapors 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. Do not interrupt flushing. Victim must seek immediate medical attention.

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

4. FIRST-AID MEASURES (Continued)

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. Rinse mouth with water immediately. Victim should drink milk quantities of water. If milk is available, victim should drink it after drinking water. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow.

Victims of chemical exposure must be taken for medical attention. Rescuers should be taken for medical attention, if necessary. Take copy of label and MSDS to physician or health professional with victim.

5. FIRE-FIGHTING MEASURES

FLASH POINT, °C (method): Not flammable.

AUTOIGNITION TEMPERATURE, °C: Not flammable.

FLAMMABLE LIMITS (in air by volume, %): Lower (LEL): Not applicable.
Upper (UEL): Not applicable.

FIRE EXTINGUISHING MATERIALS:

Water Spray: YES

Foam: YES

Halon: YES

Carbon Dioxide: YES

Dry Chemical: YES

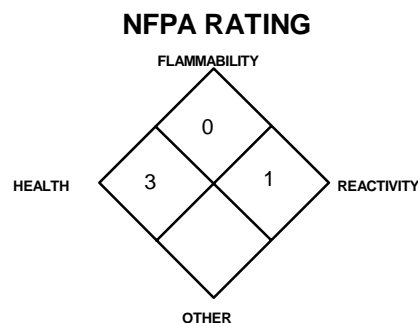
Other: Any "ABC" Class.

UNUSUAL FIRE AND EXPLOSION HAZARDS: This product is corrosive, and presents a significant contact hazard to fire-fighters. When involved in a fire, this material may decompose and produce irritating vapors; oxides, peroxides, and carbonates of sodium; and gases (carbon monoxide and carbon dioxide). Sodium Hydroxide can react with water and many other commonly encountered materials to generate sufficient heat to ignite nearby combustible materials. It can also react with metals such as aluminum, tin, and zinc to form flammable hydrogen gas. Contact with many organic and inorganic chemicals may cause explosion.

Explosion Sensitivity to Mechanical Impact: Not sensitive.

Explosion Sensitivity to Static Discharge: Not sensitive.

SPECIAL FIRE-FIGHTING PROCEDURES: Incipient fire responders should wear eye protection. Structural fire fighters must wear Self-Contained Breathing Apparatus and full protective equipment. Chemical resistant clothing may be necessary. If this product is involved in a fire, fire run-off water should be contained to prevent possible environmental damage.



6. ACCIDENTAL RELEASE MEASURES

SPILL AND LEAK RESPONSE: Uncontrolled releases should be responded to by trained personnel using pre-planned procedures. Proper protective equipment should be used. In case of a large spill, clear the affected area, protect people, and respond with trained personnel.

In the event of a non-incident releases, Minimum Personal Protective Equipment should be **Level B: triple-gloves (rubber gloves and nitrile gloves, over latex gloves), chemically resistant suit and boots, hard-hat, and Self Contained Breathing Apparatus**. Absorb spilled liquid with polypads or other suitable absorbent materials. Neutralize residue with citric acid or other caustic neutralizing agent. Decontaminate the area thoroughly. Place all spill residue in an appropriate container and seal. Dispose of in accordance with Federal, State, and local hazardous waste disposal regulations (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 hands after handling this product. Do not eat or drink while handling this product. All work practices should minimize the generation of splashes and aerosols. Remove contaminated clothing immediately.

STORAGE AND HANDLING PRACTICES: All employees who handle this material should be trained to handle it safely. Avoid breathing vapors or mists generated by this product. Use in a well-ventilated location. Open containers slowly, on a stable surface. Containers of this product must be properly labeled. Empty containers may contain residual liquid or vapors; 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, or in a diked area, as appropriate. Keep container tightly closed when not in use. Wash thoroughly after using this material. Storage areas should be made of fire-resistant materials. If appropriate, post warning signs in storage and use areas. 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. Always use this product in areas where adequate ventilation is provided. Decontaminate equipment using caustic neutralizing agent, followed by a triple-rinse with water, before maintenance begins. Collect all rinsates and dispose of according to applicable Federal, State, or local procedures.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION

VENTILATION AND ENGINEERING CONTROLS: Use with adequate ventilation to ensure exposures are below limits in Section 2 (Composition and Information on Ingredients). If necessary, vent material to outside, taking appropriate precautions to prevent environmental contamination. Ensure eyewash/safety shower stations are available near where this product is used.

RESPIRATORY PROTECTION: Maintain airborne contaminant concentrations below exposure limits listed in Section 2 (Composition and Information on Ingredients), if applicable. If respiratory protection is needed, use only protection authorized in 29 CFR 1910.134, or applicable State regulations. Use supplied air respiration protection if oxygen levels are below 19.5% or are unknown.

EYE PROTECTION: Splash goggles or safety glasses. Face shields recommended when using quantities of this product in excess of 1 gallon.

HAND PROTECTION: Wear Neoprene Rubber gloves for routine industrial use. Use triple gloves for spill response, as stated in Section 6 (Accidental Release Measures) of this MSDS.

BODY PROTECTION: Use body protection appropriate for task. An apron, or other impermeable body protection is suggested. Full-body chemical protective clothing is recommended for emergency response procedures.

9. PHYSICAL and CHEMICAL PROPERTIES

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

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

SPECIFIC GRAVITY (water = 1): 1.30

FREEZING/MELTING POINT: < 0°C

SOLUBILITY IN WATER: Completely soluble.

BOILING POINT: 106°C

VAPOR PRESSURE, mm Hg @ 20°C: 18

pH: > 12.5

ODOR THRESHOLD: Not available.

LOG WATER/OIL DISTRIBUTION COEFFICIENT: Not available.

APPEARANCE AND COLOR: This product is a colorless solution which is relatively viscous or "syrup-like".

HOW TO DETECT THIS SUBSTANCE (warning properties): Litmus paper will turn blue-purple upon contact with this product.

10. STABILITY and REACTIVITY

STABILITY: Stable.

DECOMPOSITION PRODUCTS: Sodium oxides.

MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: Strong acids, aluminum, and other metals.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Contact with incompatible materials.

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

11. TOXICOLOGICAL INFORMATION

TOXICITY DATA: The specific toxicology data for components greater than 1 percent in concentration are provided below.

SODIUM HYDROXIDE:

Eye Irritancy (monkey) = 1% solution, 24 hr,

Severe.

Skin Irritancy (rabbit) = 500 mg, 24 hr,

Severe.

Eye Irritancy (rabbit) = 4 g, Mild.

SODIUM HYDROXIDE (continued):

Eye Irritancy (rabbit) = 1% solution, Severe.

Eye Irritancy (rabbit) = 50 :g, 24 hr, Severe.

Eye Irritancy (rabbit) = 1 mg, 24 hr, Severe.

Eye Irritancy (rabbit) = 100 mg with rinse,

Severe.

SODIUM HYDROXIDE (continued):

Cytogenic Analysis System (grasshopper, parenteral) = 20 mg

LD₅₀ (intraperitoneal, mouse) = 40 mg/kg.

LDLo (oral, rabbit) = 500 mg/kg.

SUSPECTED CANCER AGENT: The components of this product are not found on the following lists: FEDERAL OSHA Z LIST, NTP, IARC, CAL/OSHA and therefore are not considered to be, nor suspected to be, cancer-causing agents by these agencies.

IRRITANCY OF PRODUCT: This product is severely irritating and corrosive to contaminated tissue, especially after prolonged contact.

SENSITIZATION TO THE PRODUCT: The components of this product are not known to be sensitizers with repeated or prolonged use.

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

Mutagenicity: This product is not reported to produce mutagenic effects in humans. Animal mutation data are available for Sodium Hydroxide (a component of this product present in 20-30 percent); these data were obtained during clinical studies on specific animal tissues exposed to high doses of this compound.

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

Teratogenicity: This product is not reported to produce teratogenic effects in humans.

Reproductive Toxicity: This product is not reported to cause reproductive toxicity 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.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Pre-existing dermatitis, other skin disorders, and respiratory diseases may be aggravated by over-exposure to this product.

RECOMMENDATIONS TO PHYSICIANS: Treat symptoms and eliminate over-exposure. Be observant for signs of pulmonary edema in the event of severe inhalation over-exposures.

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

12. ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

ENVIRONMENTAL STABILITY: Sodium Hydroxide can react with carbon dioxide in air to form sodium carbonate. Additional environmental data is available as follows:

Sodium Hydroxide: K_{ow} = too low to be measured. Water solubility = 9 g/0.9 mL water. BOD: None.

12. ECOLOGICAL INFORMATION (Continued)

EFFECT OF MATERIAL ON PLANTS or ANIMALS: This product can be harmful to plant and animal life if it is released into the environment. Refer to Section 11 (Toxicology Information) for clinical data on the effects of this product's components on test animals.

EFFECT OF CHEMICAL ON AQUATIC LIFE: This product can substantially raise the pH of an aquatic environment and can be extremely toxic to fish and aquatic plants. Additional aquatic toxicity data are available as follows:

SODIUM HYDROXIDE:

Acute Hazard Level:

Lethal pH (goldfish) = 10.9

Lethal pH (bluegill) = 10.5

LC₁₀₀ (*Cyprinus carpio*) = 180 ppm/24 hr/25 °C

TL_m (mosquito fish) = 125 ppm/96 hr (fresh water)

TL_m (bluegill) = 99 mg/L/48 hr (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: D002 (Characteristic, Corrosive), applicable to wastes consisting only of this product.

14. TRANSPORTATION INFORMATION

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

PROPER SHIPPING NAME:	Sodium Hydroxide Solution
HAZARD CLASS NUMBER and DESCRIPTION:	8 (Corrosive Material)
UN IDENTIFICATION NUMBER:	UN 1824
PACKING GROUP:	II
DOT LABEL(S) REQUIRED:	Corrosive

EMERGENCY RESPONSE GUIDEBOOK NUMBER, 2004: 154

MARINE POLLUTANT: This product does not contain any components which are designated by the Department of Transportation to be Marine Pollutants (per 49 CFR 172.101 Appendix B).

TRANSPORT CANADA TRANSPORTATION OF DANGEROUS GOODS REGULATIONS: THIS MATERIAL IS CONSIDERED AS DANGEROUS GOODS. Refer to information above for Canadian Shipments.

15. REGULATORY INFORMATION

SARA REPORTING REQUIREMENTS: This product is subject to the reporting requirements of Sections 302, 304 and 313 of Title III of the Superfund Amendments and Reauthorization Act., as follows:

COMPONENT	SARA 302	SARA 304	SARA 313
Sodium Hydroxide	No	Yes	No

SARA Threshold Planning Quantity: Not applicable.

TSCA INVENTORY STATUS: All components of this product are listed on the TSCA Inventory.

CERCLA REPORTABLE QUANTITY (RQ): Sodium Hydroxide = 1000 lbs.

OTHER FEDERAL REGULATIONS: Not applicable.

15. REGULATORY INFORMATION (Continued)

STATE REGULATORY INFORMATION: Components of his product are covered under specific State regulations, as denoted below:

Alaska - Designated Toxic and Hazardous Substances: Sodium Hydroxide.

California - Permissible Exposure Limits for Chemical Contaminants: Sodium Hydroxide.

Florida - Substance List: Sodium Hydroxide.

Illinois - Toxic Substance List: Sodium Hydroxide.

Kansas - Section 302/313 List: Sodium Hydroxide.

Massachusetts - Substance List: Sodium Hydroxide.

Minnesota - List of Hazardous Substances: Sodium Hydroxide.

Missouri - Employer Information/Toxic Substance List: Sodium Hydroxide.

New Jersey - Right to Know Hazardous Substance List: Sodium Hydroxide.

North Dakota - List of Hazardous Chemicals, Reportable Quantities: Sodium Hydroxide.

Pennsylvania - Hazardous Substance List: Sodium Hydroxide.

Rhode Island - Hazardous Substance List: Sodium Hydroxide.

Texas - Hazardous Substance List: Sodium Hydroxide.

West Virginia - Hazardous Substance List: Sodium Hydroxide.

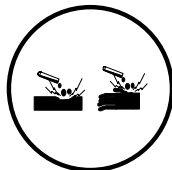
Wisconsin - Toxic and Hazardous Substances: Sodium Hydroxide.

CALIFORNIA PROPOSITION 65: No component of this product is on the California Proposition 65 lists.

LABELING (Precautionary Statements): **DANGER!** CORROSIVE MATERIAL! LIQUID AND MIST CAUSE SEVERE BURNS TO ALL BODY TISSUE. MAY BE FATAL IF SWALLOWED. HARMFUL IF INHALED. Do not get into eyes, on skin or clothing. Avoid breathing spray or mist. Do not take internally. Use with adequate ventilation and employ respiratory protection when exposed to the mist or spray. When handling, wear chemical splash goggles, face shield, rubber gloves and protective clothing. Wash thoroughly after handling. Keep container closed when not in use. **FIRST-AID:** In case of contact, immediately flush skin or eyes for at least 15 minutes. If inhaled, move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If ingested, do not induce vomiting. Get medical attention. **IN CASE OF FIRE:** Use dry chemical, CO₂, or alcohol foam. **IN CASE OF SPILL:** Neutralize residue with caustic neutralizing agent. Place in a suitable container. Refer to MSDS for additional information.

TARGET ORGANS: Respiratory system, skin, eyes.

WHMIS SYMBOLS



16. OTHER INFORMATION

PREPARED BY:

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763-479-2008

DATE OF PRINTING:

December 4, 2006

All statements, technical information and recommendations herein are based on tests we believe to be reliable, but the accuracy or completeness thereof is not guaranteed. **THE FOLLOWING IS MADE IN LIEU OF ALL WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PURPOSE.** Seller's and manufacturer's only obligation shall be to replace such quantity of the product proved to be defective. Before using, user shall determine the suitability of the product for its intended use, and user assumes all risks and liability whatsoever in connection therewith.

NEITHER SELLER NOR MANUFACTURER SHALL BE LIABLE EITHER IN TORT OR IN CONTRACT FOR ANY LOSS OR DAMAGE, DIRECT, INCIDENTAL OR CONSEQUENTIAL, ARISING OUT OF THE USE OR THE INABILITY TO USE THE PRODUCT.

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 which uniquely identifies each constituent. It is used for computer-related searching.

EXPOSURE LIMITS IN AIR:

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

TLV - Threshold Limit Value - an airborne concentration of a substance which 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 **Time Weighted Average (TWA)**, the 15-minute **Short Term Exposure Limit**, and the instantaneous **Ceiling Level**. Skin adsorption effects must also be considered.

OSHA - U.S. Occupational Safety and Health Administration.

PEL - Permissible Exposure Limit - 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 which was vacated by Court Order.

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. **The DFG - MAK** is the Republic of Germany's Maximum Exposure Level, similar to the U.S. PEL. **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**). NIOSH issues exposure guidelines called **Recommended Exposure Levels (RELs)**. When no exposure guidelines are established, an entry of **NE** is made for reference.

FLAMMABILITY LIMITS IN AIR:

Much of the information related to fire and explosion is derived from the **National Fire Protection Association (NFPA)**. **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:

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. Data from several sources are used to evaluate the cancer-causing potential of the material. 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 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 death. **BEI** - 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:

This section explains the impact of various laws and regulations on the material. **EPA** is the U.S. Environmental Protection Agency. **WHMIS** is the Canadian Workplace Hazardous Materials Information System. **DOT** and **TC** are the U.S. Department of Transportation and the Transport Canada, respectively. Other acronyms used are: **Superfund Amendments and Reauthorization Act (SARA)**; the **Toxic Substance Control Act (TSCA)**; Marine Pollutant status according to the **DOT**; California's Safe Drinking Water Act (**Proposition 65**); 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.