

PRODUCT: CAUSTIC SODA 50%

SECTION 01: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER: T. DONOVAN & SON (1997) LTD.
700 WILSON STREET
SAINT JOHN, NEW BRUNSWICK
CANADA E2M 3V2
TOLL FREE: 1-888-799-2645 / LOCAL (506) 642-1500

PRODUCT NAME: Caustic Soda 50%

CHEMICAL FORMULA: NaOH In Water.

CHEMICAL FAMILY: Inorganic Alkali.

MATERIAL USE: Industrial Boiler Treatment.

EMERGENCY PHONE NUMBER: (613)-996-6666

SECTION 02: HAZARDS IDENTIFICATION

SIGNAL WORD: DANGER.

HAZARD CLASSIFICATION: Skin Corrosion - Category 1A.
Serious Eye Damage - Category 1.
Corrosive to Metals - Category 1.

HAZARD STATEMENT: **H314:** Causes severe skin burns and eye damage.
H290: May be corrosive to metals.
H402: Harmful to aquatic life.

PRECAUTIONARY STATEMENT: **P260:** Do not breathe dust/fume/gas/mist/vapours/spray.
P264: Wash thoroughly after handling.
P273: Avoid release to the environment.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331: IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303+P361+P353: IF ON SKIN (or hair): remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340: IF INHALED: remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338: IF IN EYES: rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310: Immediately call a POISON CENTER or doctor/physician.
P363: Wash contaminated clothing before reuse.
P405: Store locked up.
P501: Dispose of contents/container according to all applicable regulations.

OTHER HAZARDS None.

SECTION 03: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENTS	CAS #	WT. %
Sodium Hydroxide	1310-73-2	50

Definitions:

CAS - Chemical Abstract Service registry number.

WT. % - Percent Weight.

PRODUCT: CAUSTIC SODA 50%

SECTION 04: FIRST AID MEASURES

BY ROUTE OF ENTRY: You may have 10 seconds or less to avoid serious permanent injury. **Caution:** if unconscious, having trouble breathing or in convulsions, do not induce vomiting or give water. In case of inhalation, remove to fresh air. Seek medical attention. If breathing difficult, give oxygen. Get medical attention immediately. If breathing has stopped, administer artificial respiration and seek medical attention. For skin contact, flush with water immediately for at least 15 minutes. Remove contaminated clothing and shoes immediately. Continue flushing with water for at least 15 minutes. Get immediate medical attention. Wash contaminated clothing thoroughly before re-use. Discard contaminated shoes. Flush eyes with large amounts of running water for at least 15 minutes. Hold eyelids apart to ensure rinsing of the entire surface of the eye and lids with water. Check for and remove contact lenses. Continue flushing eyes for 15 minutes. Get immediate medical attention. If ingested, give water, do not induce vomiting, call a physician. If vomiting occurs keep head below hips to prevent aspiration of liquid into the lungs. Give fluids again. Call a physician or poison control centre immediately.

NOTES TO PHYSICIAN: The application of ice to skin burns will reduce scarring.

SECTION 05: FIRE FIGHTING MEASURES

FLAMMABILITY: Not Flammable.

SUITABLE EXTINGUISHING MEDIA: Suitable for Surrounding Fire.

HAZARDOUS COMBUSTION PRODUCTS: Not Applicable.

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL: No Data Available.

SPECIAL PROCEDURES: Wear full protective equipment including a self-contained breathing apparatus (**Note:** caution corrosive material).

SECTION 06: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Stop spill at source if possible without risk. **Caution!** Corrosive material. Follow all applicable fire and explosion precautions during the spill response procedure.

SECTION 07: HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING: Corrosive material. Handle in accordance with good industrial hygiene and safety practices. Avoid contact with eyes, skin and clothing. Avoid breathing mist or vapour. Wear protective equipment during handling. When diluting, always add the product to water, never add water to the product. Keep containers closed or sealed. Empty containers may contain hazardous residues. Follow label warnings even after container is emptied.

CONDITIONS FOR SAFE STORAGE: Protect container from physical damage. Keep the container tightly closed when not in use. Store away from incompatible materials. Store in a cool and well-ventilated area.

SECTION 08: EXPOSURE CONTROLS/PERSONAL PROTECTION

INGREDIENT(S)	ACGIH TLV		OSHA PEL		NIOSH
	TWA	STEL	PEL	STEL	IDLH
Sodium Hydroxide:	-	2 mg/m ³ ceiling exposure limit (TLV-C)	-	2 mg/m ³	10 mg/m ³ .

Definitions:

ACGIH - American Conference of Governmental Industrial Hygienists.
 NIOSH - National Institute for Occupational Safety and Health.
 OSHA - Occupational Safety and Health Administration.
 PEL - Permissible Exposure Limit.

RELs - Recommended Exposure Limits.
 STEL - Short-term Exposure Limit.
 TLV - Threshold Limit Value.
 TWA - Time Weighted Average.

PRODUCT: CAUSTIC SODA 50%

SECTION 08: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:	Good Ventilation Should Be Provided To Keep Vapour And Mist Concentrations Below The Exposure Limits.
SKIN AND BODY PROTECTION:	Wear chemical resistant gloves. Contact Glove Manufacturer For Specific Information.
RESPIRATORY PROTECTION:	Use NIOSH Approved Supplied-Air Respirator.
EYE/FACE PROTECTION:	Splash Proof Chemical Goggles. Face Shield.
FOOTWEAR/TYPE:	Acid-Proof Boots.
OTHER/TYPE:	Eye wash station and safety shower should be located near the work station.

SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE:	Liquid.
ODOUR:	Odorless.
ODOUR THRESHOLD:	Not Applicable.
pH:	14.
MELTING POINT/FREEZING POINT:	12°C (53.6°F).
BOILING POINT:	143°C.
FLASH POINT, METHOD:	Not Applicable, Not Flammable.
EVAPORATION RATE:	No Data Available.
FLAMMABILITY (SOLIDS AND GASES):	Not Applicable.
UPPER FLAMMABLE LIMIT (% BY VOL):	Not Applicable.
LOWER FLAMMABLE LIMIT (% BY VOL):	Not Applicable.
VAPOUR PRESSURE:	1.2 hPa.
VAPOUR DENSITY (AIR=1):	No Data Available.
SPECIFIC GRAVITY (WATER=1):	1.52.
SOLUBILITY IN WATER (% W/W):	Complete.
COEFFICIENT OF WATER/OIL DIST:	3.88.
AUTO IGNITION TEMPERATURE:	No Data Available.
DECOMPOSITION TEMPERATURE:	No Data Available.
VISCOSITY:	Dynamic 0.04 Pa.s (30°C).

SECTION 10: STABILITY AND REACTIVITY

REACTIVITY:	Excessive heat, sparks and open flame. Reacts violently with water and organic materials with evolution of heat. Reacts with acids.
CHEMICAL STABILITY:	Yes.
POSSIBILITY OF HAZARDOUS REACTIONS:	See <i>Reactivity</i> .
CONDITIONS TO AVOID:	Avoid direct sunlight. Avoid temperature extremes.
SENSITIVITY TO STATIC DISCHARGE:	No Data Available.
SENSITIVITY TO IMPACT:	No Data Available.
COMPATABILITY WITH OTHER SUBSTANCES:	Yes.
REACTIVITY CONDITIONS:	Strong Oxidizing Agents, Acids.
HAZARDOUS DECOMPOSITION PRODUCTS:	Sodium Oxide.

SECTION 11: TOXICOLOGICAL INFORMATION

INGREDIENT(S)	LC50	LD50
Sodium Hydroxide	Not Established	Oral: 2400 mg/kg (Rat) Dermal:> 2000 mg/kg (<i>Leporidae</i> sp. (Rabbit))

PRODUCT: CAUSTIC SODA 50%

SECTION 11: TOXICOLOGICAL INFORMATION**ACUTE TOXICITY:****LC 50 OF MATERIAL, ROUTE & SPECIES:** No Data Available.**LD 50 OF MATERIAL, ROUTE & SPECIES:** 1350 mg/kg. Dermal, Rabbit.**ROUTE OF ENTRY:****INHALATION:** Mists and vapours may cause severe irritation to the respiratory tract.**INGESTION:** Immediate effects may include: burns of the mouth, esophagus and stomach, with severe pain, bleeding, vomiting, diarrhea and collapse of blood pressure. Damage may appear days after exposure. Swallowing may be fatal.**SKIN CORROSION / IRRITATION:** Possible skin corrosion, burns or ulcers.**SKIN ABSORPTION:** No Data Available.**SERIOUS EYE DAMAGE / EYE IRRITATION:** Possible eye corrosion or ulceration (blindness may result).**IRRITANCY OF MATERIAL** See Section 2.**EFFECTS OF ACUTE EXPOSURE:** Severe chemical burns to eyes and skin. Severity of burn is generally determined by the concentration of the solution and duration of exposure. Mists may produce severe irritation of respiratory tract (cough, shortness of breath, choking).**MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:** May aggravate an existing dermatitis, asthma, and inflammatory or fibrotic pulmonary disease.**SYNERGISTIC MATERIALS:** None.**EFFECTS OF CHRONIC EXPOSURE:** Target organs for acute and chronic overexposure (NIOSH 90-117): respiratory system, eyes, skin, teeth. Mists: possible irritation of the nose and throat with sneezing, sore throat or runny nose. Gross overexposure: possible irritation of nose, throat, and lungs with cough, difficulty breathing or shortness of breath. Pulmonary edema with cough, wheezing, abnormal lungs sounds, possibly progressing to shortness of breath and bluish discoloration of the skin; symptoms may be delayed. Repeated or prolonged exposure to mists may cause corrosion of teeth. Contact: possible skin corrosion, burns or ulcers. Possible eye corrosion or ulceration.**EFFECTS OF ACUTE EXPOSURE:** Severe chemical burns to eyes and skin. Severity of burn is generally determined by the concentration of the solution and duration of exposure. Mists may produce severe irritation of respiratory tract (cough, shortness of breath, choking).**CARCINOGENICITY:** Not Classified as a Carcinogen.**REPRODUCTIVE TOXICITY:** No Data Available.**SENSITIZING CAPABILITY OF MATERIAL:** No Data Available.**SECTION 12: ECOLOGICAL INFORMATION****ECOTOXICITY:** No Data Available.**SECTION 13: DISPOSAL CONSIDERATIONS****DISPOSAL METHODS:** In accordance with municipal, provincial and federal regulations.**SECTION 14: TRANSPORT INFORMATION****TRANSPORTATION OF DANGEROUS GOODS (TDG):** Regulated.**UNITED NATIONS (UN) NUMBER:** 1824.**TRANSPORT HAZARD CLASS:** 8.**PACKING GROUP:** II.**PROPER SHIPPING NAME:** SODIUM HYDROXIDE SOLUTION.**SPECIAL SHIPPING INSTRUCTIONS:** Refer to TDGs regulations.

PRODUCT: CAUSTIC SODA 50%

SECTION 15: REGULATORY INFORMATION**WORKPLACE HAZARDOUS MATERIALS
INFORMATION SYSTEM (WHMIS)
CLASSIFICATION:**

D2A, D2B, E.

**HAZARDOUS PRODUCT REGULATIONS
(HPR) COMPLIANCE:**

This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

SECTION 16: OTHER INFORMATION**PREPARED BY:**

T. Donovan & Son (1997) Ltd.

PREPARATION DATE:

February, 2018

DISCLAIMER:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. Regulatory requirements are subject to change and may differ between various locations. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.