

MATERIAL SAFETY DATA SHEET: B601**1. PRODUCT INFORMATION:**

PRODUCT NAME: B601	PRODUCT USE: Closed system buffer
MANUFACTURER/SUPPLIER: Vedra Industries, 6295 Northam Dr., Unit 16, Mississauga, Ontario, Canada L4V-1W8	EMERGENCY TELEPHONE NUMBER: 877-211-6727 or CANUTEC 613-996-6666.

2. PREPARATION INFORMATION:

MSDS PREPARED BY: Vedra Industries	DATE PREPARED: Oct. 25, 2005 (M/D/Y)
TELEPHONE: 877-211-6727	SUPERSEDES:

3. HAZARDOUS INGREDIENTS

INGREDIENT	CHEMICAL NAME	CAS REGISTRY NO.	% BY WT.
1	Sodium hydroxide	1310-73-2	1.0 – 5.0
2	Sodium metaborate	7775-19-1	10.0 – 30.0

INGREDIENT	ACUTE ORAL LD50 (mg/kg)	ACUTE DERMAL LD50 (mg/kg)	ACUTE INHALATION LC50 (ppm)	TLV
1	Not available	Not available	Not available	2 mg/m ³
2	>2400 (rat)	2000 (rabbit)	Not available	3 mg/m ³

The balance of the components are not hazardous according to WHMIS classifications and are not listed on the Ingredient Disclosure List.

4. PHYSICAL DATA:

APPEARANCE: Clear, pale yellow	PHYSICAL STATE: Liquid	ODOUR: Not determined	ODOUR THRESHOLD: Not determined
DENSITY (g/ml @ 25°C): 1.14	EVAPORATION RATE: 1 (water = 1.0)	VAPOUR DENSITY: Not tested	VAPOUR PRESSURE: Not tested
pH (neat): 13.0 – 14.0	pH (1000 ppm in water) Not tested	BOILING POINT: > 100°C	FREEZING /MELTING POINT: -2 °C
OIL/WATER PARTITION COEFFICIENT: Not tested		SOLUBILITY: Completely soluble in water	

5. FIRE AND EXPLOSION HAZARDS:

FLASH POINT & METHOD: Not Applicable	AUTO-IGNITION TEMPERATURE: Not Applicable
UPPER FLAMMABLE LIMIT (% vol. in air): Not Applicable	LOWER FLAMMABLE LIMIT (% vol. in air): Not Applicable
FLAMMABILITY CONDITIONS: Does not burn	HAZARDOUS COMBUSTION PRODUCTS: Oxides of carbon, Oxides of nitrogen
EXTINGUISHING MEDIA: Use water spray to cool fire-exposed surfaces and to protect personnel. Water fog, carbon dioxide, foam or dry chemical may be used to extinguish fire.	SPECIAL FIRE FIGHTING PROCEDURES: Wear NIOSH approved self-contained breathing apparatus (such as "Scott Air-Pak"), and full protective gear. Isolate "fuel" supply from fire.
EXPLOSION (Sensitivity to Mechanical Impact): Empty containers retain product residue (liquid and/or vapor) and can be dangerous. Avoid pressurizing, cutting, welding, brazing, soldering, drilling, or grinding the container.	EXPLOSION (Sensitivity to Static Discharge): Empty containers retain product residue (liquid and/or vapor) and can be dangerous. Avoid exposing such containers to heat, flame, sparks, static electricity or other sources of ignition.

6. REACTIVITY:

CHEMICAL STABILITY: Stable under normal conditions of use and storage.	CONDITIONS OF UNSTABILITY: Extreme temperatures
INCOMPATIBILITY WITH OTHER SUBSTANCES: Strong acids	HAZARDOUS DECOMPOSITION PRODUCTS: None known.

7. TOXICOLOGICAL DATA:**PRIMARY ROUTES OF EXPOSURE:**

EYES: Yes	SKIN: Yes	INHALATION: Yes	INGESTION: Not Expected
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EFFECTS FROM ACUTE EXPOSURE:

Eye exposure:	Irritant. Effects may range from moderate to severe irritation depending on the length of exposure, solution concentration, and first aid measures.
Skin exposure:	Irritant. Mild to severe skin irritation depending on the length of the exposure, solution concentration, and first aid measures.
Inhalation:	May cause irritation of mucous membranes and lungs. Exposed individuals should be monitored for respiratory distress, bronchitis or pneumonia.
Ingestion:	May cause gastrointestinal disturbances such as nausea, vomiting, and diarrhea.

EFFECTS FROM CHRONIC EXPOSURE:

The effects from chronic exposure to this product have not been fully evaluated.

ACUTE EFFECTS (Exposure Limits):

Acute Oral LD50:	No data available.
Acute Dermal LD50:	No data available.
Acute Inhalation LC50:	No data available.
IRRITANT EFFECTS:	Corrosive to eyes, skin irritant.
SENSITIZATION EFFECTS:	None known.

CARCINOGENIC POTENTIAL:	Not listed in any of OSHA Standards Section 1910.1200 sources as carcinogenic.
REPRODUCTIVE TOXICITY:	None known.
TERATOGENICITY:	None known.
MUTAGENICITY:	None known.
SYNERGISTIC EFFECTS:	None known.

8. PERSONAL PROTECTION EQUIPMENT:

Hands: Chemical resistant gloves required; chemically impermeable gloves recommended.

Eyes: Chemical-proof goggles required, face shield recommended.

Respiratory: If misting can occur, a NIOSH approved respirator is recommended.

Body Protective Clothing: Chemical resistant coverall such as a TYVEC suit is required.

Footwear: Steel-toed chemical resistant boots recommended.

Other: An emergency shower complete with eyewash fountain is strongly recommended.

ENGINEERING CONTROLS:

General mechanical ventilation system is adequate. However, local exhaust system is preferred to maintain airborne concentrations below the recommended occupational exposure limits, whenever misting conditions are present or the material is used in a confined space.

LEAK AND SPILL PROCEDURES:

Before responding to a spill or leak of this product, review each section of this MSDS. Follow the recommendations given in the "Handling Procedures and Equipment" section. Check the "Fire and Explosion Hazards" section to determine if the use of non-sparking tools is merited. Insure that spilled or leaked product does not come into contact with materials listed as incompatible. If irritating fumes are present, consider evacuation of affected areas. Initially minimize area affected by the spill or leak. Block any potential routes to water systems. Place in a properly labeled container for later disposal. Larger spills may require a vacuum.

WASTE DISPOSAL METHODS:

Disposal shall be in accordance with all applicable federal, provincial and municipal waste regulations.

HANDLING PROCEDURES AND EQUIPMENT:

Do not handle unless the safety precautions have been read and understood. Avoid skin and eye contact. Avoid inhalation of dust or vapours. Do not puncture, drag or slide containers. Do not smoke in any chemical handling or storage area. Wash hands before eating.

STORAGE REQUIREMENTS:

Store in a dry well-ventilated location. Protect from freezing. Keep containers tightly closed. Store away from incompatible materials and ignition sources

SPECIAL SHIPPING INFORMATION:

Refer to Section 10: T.D.G. Classification

9. FIRST AID MEASURES:**EYE EXPOSURE:**

Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for at least 20-30 minutes, by the clock, while holding the eyelid(s) open. Neutral saline solution may be used as soon as it is available. DO NOT INTERRUPT FLUSHING. If necessary, keep emergency vehicle waiting. Take care not to rinse contaminated water into the unaffected eye or unto face. If irritation persists, repeat flushing. Quickly transport victim to an emergency care facility.

SKIN EXPOSURE:

As quickly as possible, flush with lukewarm, gently flowing water for at least 20 - 30 minutes or until the chemical is removed. Under running water, remove contaminated clothing, shoes and leather goods (e.g. watchbands, belts). If irritation persists, repeat flushing. Obtain medical advice immediately. Completely decontaminate clothing, shoes and leather goods before reuse or discard.

INHALATION:

Use proper respiratory protection to immediately move exposed individual to fresh air. If breathing is difficult, oxygen may be beneficial if administered by trained personnel, preferably on a doctor's advice. If breathing is stopped, trained personnel should begin artificial respiration (AR) or, if the heart has stopped, cardiopulmonary resuscitation (CPR) immediately. Avoid mouth-to-mouth contact by using mouth guards or shields. Immediately transport victim to an emergency care facility.

INGESTION:

NEVER give anything by mouth if victim is rapidly losing consciousness, or is unconscious or convulsing. Have victim rinse mouth thoroughly with water. DO NOT INDUCE VOMITING. Have victim drink 240 to 300 ml (8 to 10 oz.) of water to dilute material in stomach. If milk is available, it may be administered AFTER the water has been given. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Repeat administration of water. If breathing is difficult, oxygen may be beneficial if administered by trained personnel, preferably on a doctor's advice. Quickly transport victim to an emergency care facility.

10. REGULATORY CLASSIFICATIONS:

TDG CLASSIFICATION: CORROSIVE LIQUID, N.O.S. [Sodium hydroxide]

Class 8 - UN 1760 - PG III

Pest Control Products Act: REGISTRATION NUMBER: Not applicable.

U.S. FDA REGULATIONS: FDA (21 CFR) Section(s):

Not determined

WHMIS CLASSIFICATION:

Class E, Class D; Division 2B (eye and skin irritant)

DOMESTIC SUBSTANCES LIST (DSL):

All Components are listed on the DSL or otherwise comply with the Canadian Environmental Protection Act (CEPA) new substance notification requirements.

HAZARD RATING:

RATING	HEALTH	FLAMMABILITY	REACTIVITY
WHMIS	2	0	1
NFPA	2	0	1

While the information and recommendations set forth are believed to be accurate as of the date of the Material Safety Data Sheet, Vedra Industries makes no warranty with respect thereto and disclaims all liability from reliance thereon. Vedra Industries urges each customer or recipient of this MSDS to study it carefully to become aware of and understand the hazards associated with the product. To promote the safe use and handling of this product, each customer or recipient should distribute this MSDS to the product users.

Issued by Laboratory Services, Vedra Industries, 6295 Northam Dr., Unit 16,
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