

# MATERIAL SAFETY DATA SHEET

*This Material Safety Data Sheet complies with the Canadian Controlled Product Regulations.  
Abbreviations used: N/ap., Not applicable, N/av., Not available, N/est., Not established, TLV, Threshold Limit Value,*

SECTION 1 - IDENTIFICATION					
PRODUCT IDENTIFIER: <b>Jetvac -----Membrane Cleaner</b>					
PRODUCT USE: Industrial & Institutional Cleaning/Degreasing Agent for Membranes only					
SUPPLIER: <b>Gemini Packaging Limited</b> 150-12071 Jacobson Way, Richmond, British Columbia, Canada, V6W 1L5 Telephone: (604) 278-3455 Emergency Telephone: (613) 996-6666 (Canutec 24 hours)					
SECTION 2 - COMPOSITION					
HAZARDOUS INGREDIENTS	% (W/W)	CAS NUMBER	LD50	LC50	EXPOSURE LIMITS
Potassium hydroxide	1.0-10.0	1310-58-3	365 mg/kg (oral, rat)	N/est.	2 mg/m <sup>3</sup> of air (ACGIH TLV/CL)
Disodium capryloamphodipropionate	1.0-2.0	68815-55-4	N/est.	N/est.	N/est.
Sodium citrate	1.0-5.0	18996-35-5	1348 mg/kg (IP, rat)	N/est.	N/est.
Sodium gluconate	5.0-10.0	527-07-1	> 2000 mg/kg (oral, rat)	N/est.	N/est.
Metasodium silicate	1.0-3.0	6834-92-0	1153 mg/kg (oral, rat)	N/est.	10 mg/m <sup>3</sup> inhalable dust & 3 mg/m <sup>3</sup> respirable dust (ACGIH)

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### SECTION 3 - HAZARDS IDENTIFICATION

#### **EMERGENCY OVERVIEW:**

This product is an alkaline cleaning agent. Causes severe eye and severe skin irritation in humans. Can decompose at high temperatures emitting acrid smoke and irritating fumes.

#### **EFFECTS OF SHORT-TERM (ACUTE) EXPOSURE:**

**INHALATION:** Product is irritating to the nose, throat and respiratory tract.

**SKIN CONTACT:** Cause symptoms of severe skin irritation such as reddening, swelling, rash, scaling, or blistering. Excessive contact may cause drying by absorption of moisture and oils.

**EYE CONTACT:** Causes severe eye irritation, with contact causing burns.

**INGESTION:** This product causes severe irritation, a burning sensation of the mouth and throat and abdominal pain.

#### **EFFECTS OF LONG-TERM (CHRONIC) EXPOSURE:**

Prolonged contact with eyes may cause permanent eye lesions. Prolonged skin contact may cause dermatitis.

#### **MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:**

Pre-existing eye, skin, respiratory tract disorders may be aggravated by exposure.

### SECTION 4 - FIRST AID MEASURES

**INHALATION:** Move victim to fresh air. Give artificial respiration, if indicated. Obtain immediate medical attention.

**SKIN CONTACT:** Remove contaminated clothing, and wash affected area thoroughly with soap and water. If an irritation develops or persists, seek medical attention.

**EYE CONTACT:** Flush contaminated eye(s) with lukewarm, gently flowing water for at least 20 minutes while holding eyelids open. Take care not to contaminate unaffected eye. If irritation persists repeat the flushing process. Do not transport victim until the recommended flushing time has been achieved unless flushing can continue during transport. Obtain immediate medical attention.

**INGESTION:** Never give anything by mouth if victim is unconscious, rapidly losing consciousness or convulsing. Rinse mouth thoroughly with cold water and give ½ to 1 glass of water to dilute ingested material. **DO NOT INDUCE VOMITING.** If vomiting occurs naturally, have victim lean forward, head down, to reduce risk of aspiration. Obtain immediate medical attention.

**GENERAL COMMENTS:** All first-aid procedures should be reviewed by a physician familiar with the product and its conditions of use in the workplace. Physician should treat this symptomatically.

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### SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT:	N/ap.	LOWER FLAMMABILITY LIMITS:	N/ap.	SENSITIVITY TO MECHANICAL IMPACT:	Not expected to be sensitive
AUTOIGNITION TEMPERATURE:	N/ap.	UPPER FLAMMABILITY LIMITS:	N/ap.	SENSITIVITY TO STATIC DISCHARGE:	Not expected to be sensitive

**EXTINGUISHING MEDIA:** Use media suitable to control surrounding fire.

**FIRE FIGHTING INSTRUCTIONS:** Fire-exposed containers should be kept cool by spraying water. Excessive heat may cause containers to rupture. Spilled material will cause floors and walkways to become slippery. Firefighters must use self-contained breathing apparatus and protective clothing.

**HAZARDOUS COMBUSTION PRODUCTS:** Product emits acrid smoke and irritating fumes under high temperature.

**NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) HAZARD INDEX:**

**HEALTH: 3** - Causes temporary and only minor injury, **FLAMMABILITY: 1** – Stable and will not burn unless heated excessively. **REACTIVITY: 1** - Normally stable, but can become unstable at elevated temperatures and pressures. **SPECIFIC HAZARDS:** N/ap.

### SECTION 6 - ACCIDENTAL RELEASE MEASURES

**PERSONAL PROTECTION:** Avoid direct contact with material. Minimize airborne spreading of the material. If material is airborne, wear respirator. Wear protective clothing and gloves.

**ENVIRONMENTAL PRECAUTIONS:** Prevent release into waterways and sewers.

**REMEDIAL MEASURES:** Remove combustibles. Stop or reduce leak if it can be done safely. Contain spill with earth, sand or absorbent material which does not react with spilled material. Contaminated absorbent material may pose the same hazards as the spilled product. Put material in suitable, covered and labeled containers. Flush area with water. For large spills, contact fire and emergency services and supplier for advice. Notify applicable government authority if release is a reportable quantity and could adversely affect the environment.

### SECTION 7 - HANDLING AND STORAGE

**HANDLING:** Use good housekeeping practices. Avoid contamination of product with other materials. Use in a well ventilated area. Mechanical ventilation should be corrosion and explosion proof.

**STORAGE:** Store away from combustibles and incompatible materials in tightly closed containers.

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## SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

**ENGINEERING CONTROLS:** Local exhaust ventilation required. Worker exposure to vapor/mist must be kept as low as reasonably achievable.

**RESPIRATORY PROTECTION:** No respiratory protection is warranted under normal use conditions.

**EXPOSURE LIMITS:** See Section 2.

**SKIN PROTECTION:** Wear resistant gloves and work clothes covering arms and legs.

**EYE AND FACE PROTECTION:** Use chemical safety goggles, a face shield may also be necessary.

**OTHER:** Emergency showers and eye-wash stations should be readily available.

## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Pale yellow clear liquid	MELTING POINT:	N/ap.
ODOUR:	Weak	BOILING POINT:	>100°C
pH:	12.0 to 14.0	CRITICAL TEMPERATURE:	N/ap.
VAPOUR PRESSURE:	N/ap.	RELATIVE DENSITY:	1.200 to 1.250
SOLUBILITY:	Soluble in water	PARTION COEFFICIENT: n-OCTANOL/WATER	N/av.
VAPOUR DENSITY:	N/ap.	EVAPORATION RATE:	N/ap.

## SECTION 10 - STABILITY AND REACTIVITY

**CHEMICAL STABILITY:** Normally stable.

**HAZARDOUS POLYMERIZATION:** Will not undergo hazardous polymerization.

**INCOMPATIBILITY:** Reducing agents. Alkali metals and their hydroxides. Avoid oxidizable materials such as oils, greases, and powdered metals.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Decomposes at high temperatures releasing acrid smoke and irritating fumes.

## SECTION 11 - TOXICOLOGICAL INFORMATION

ROUTE(S) OF ENTRY: Inhalation (minor), Ingestion (major), Eye contact (major), Skin contact (major)

ACUTE EXPOSURE:

No specific animal data is available for this product.

CHRONIC EXPOSURE:

No specific animal data is available for this product.

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## SECTION 11 - TOXICOLOGICAL INFORMATION (con't)

IRRITANCY:	SENSITIZATION:
Expected to cause skin, eye, respiratory and gastrointestinal irritation.	Not reported.
MUTAGENICITY:	REPRODUCTIVE TOXICITY:
Not reported. Probably not mutagenic.	May cause human reproductive effects.
TERATOGENICITY:	CARCINOGENICITY:
Not reported. Probably not teratogenic.	Not listed as human carcinogen by ACGIH, IARC or OSHA
POTENTIAL FOR ACCUMULATION:	SYNERGISTIC PRODUCTS:
Not expected to accumulate.	None known.

## SECTION 12 - ECOLOGICAL INFORMATION

**ECOTOXICITY:** Be harmful to aquatic life.

**MSDS is for this concentrate “for shipping and handling procedures”; once added into the DVZ; wash water will reduce concentration to a much lower PH value. Upon completion of cleaning cycle spent liquid will still have a high pH but its alkaline strength has been greatly reduced.**

**Discharge wash down solution from this treatment “back to main treatment tank” to buffer liquid even farther for safe discharge.**

**ENVIRONMENTAL FATE:** This product has considerable solubility and mobility in water and non-significant adsorption into soil. Can be dangerous if allowed to enter drinking water intakes. Do not contaminate domestic or irrigation water supplies, lake, streams, ponds, or rivers.

**Product once spent is considered inert “follow instruction for cleaning procedures.”**

## SECTION 13 - DISPOSAL CONSIDERATIONS

**DEACTIVATING CHEMICALS:** Carefully dilute the product with water and allow the solution to naturally degrade.

**WASTE DISPOSAL METHODS:** Place used and contaminated material and packaging into suitable containers and dispose of as controlled waste. Review and follow all local, provincial, and federal regulations.

## SECTION 14 - TRANSPORT INFORMATION

**ICAO TECHNICAL INSTRUCTIONS, IMDG CODE:** Corrosive Liquid, N.O.S. (Potassium Hydroxide)

**US HAZARDOUS MATERIALS REGULATIONS:** Corrosive Liquid, N.O.S. (Potassium Hydroxide)

**CANADIAN TRANSPORTATION OF DANGEROUS GOODS REGULATIONS:** Class 8 (Corrosive). UN 1760, PG II.

**See Dealer for Exemption for small quantity and small packaging shipping instructions**

## Jet Vac Stainless Membrane Cleaner

## SECTION 15 - REGULATORY INFORMATION

**CANADIAN FEDERAL REGULATIONS:**

**CEPA, DOMESTIC SUBSTANCES LIST:** All ingredients are listed.

**WHMIS CLASSIFICATION:** Class E (**corrosive**).

**SECTION 16 - OTHER INFORMATION**

PREPARATION DATE: October 21, 2013

PREPARED BY: Gemini Packaging Ltd.

DECLARATION: This Material Safety Data Sheet meets or exceeds all the requirements of the Canadian Controlled Product Regulations.