

# MATERIAL SAFETY DATA SHEET

## SECTION I – PRODUCT & COMPANY IDENTIFICATION

**Product Name:** Norsol Smooth Etch

**Product Use:** Aluminum Surface Preparation

**Manufacturer:** Contact supplier

**Supplier:** Northern Technical Solutions Inc.

**Address:** 7040 Wellington Rd 124 South  
Guelph, ON N1H 6J3

**Telephone Number:** 519-766-9899

**Emergency Telephone Number:** 519-766-9899

## SECTION 2 – HAZARDOUS INGREDIENTS

Chemical Name	CAS#	Wt%	ACGIH-TLVs 8 hr TWA	NIOSH IDLH	LC <sub>50</sub> (4 hr, Rat)	LD <sub>50</sub> (Oral, Rat)
Sodium hydroxide	1310-73-2	30 - 60	Not available	10 mg/m <sup>3</sup>	Not available	Not available

## SECTION 3 – HAZARDS

**Emergency Overview:** DANGER. CORROSIVE. CAUSES CHEMICAL BURNS. MAY CAUSE BLINDNESS.

**WHMIS:** E – Corrosive



**HMIS & NFPA:**

<b>HEALTH</b>	3
<b>FLAMMABILITY</b>	0
<b>PHYSICAL HAZARD</b>	0
<b>PPE</b>	X



Legend	
Extreme Danger	4
Serious	3
Moderate	2
Slight	1
Minimal	0
Chronic	*

**TDG/DOT:** SODIUM HYDROXIDE SOLUTION; Class 8; UN1824; PG II

**Target Organs:** Eyes, skin, respiratory tract.

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## SECTION 4 - FIRST AID MEASURES

**Eyes:** Immediately flush eye(s) with lukewarm, gently flowing water continuously for at least 20 minutes, while holding the eyelid(s) open. Obtain medical attention immediately.

**Skin:** Immediately flush skin with plenty of water while removing contaminated clothing. Continuously flush contaminated area with lukewarm, gently flowing water for at least 20 minutes. Obtain medical attention immediately.

**Inhalation:** Move victim to fresh air. Obtain medical attention immediately.

**Ingestion:** Obtain medical attention immediately. Do not induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration.

## SECTION 5 - FIRE FIGHTING MEASURES

**Flash Point (°C/°F - TCC):** Not available.      **LEL:** Not available.      **UEL:** Not available.

**Hazardous Combustion Products:** Oxides carbon.

**Autoignition Temperature (°C/°F):** Not available.

**Extinguishing Media:** Dry chemical, carbon dioxide.

**Fire Fighting Procedures:** Fire-fighters should wear full protective gear with self-contained breathing apparatus (SCBA).

**Fire and Explosion Hazards:** Not flammable by WHMIS/OSHA criteria. Can react with metals, such as aluminum, tin, or zinc to form flammable hydrogen gas.

**Sensitivity to Mechanical Impact:** Not available.

**Sensitivity to Static Discharge:** Not available.

## SECTION 6 – ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** Before attempting clean-up, refer to Section 8 personal protection. Contact emergency services and supplier for advice.

**Spill Response:** Evacuate unprotected and untrained personnel from the area. The spill should be handled by qualified personnel only. Ventilate the area. Contain spill. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. Cover spill with a non-combustible material such as vermiculite or other commercially available inorganic absorbent. Cover spill with absorbent until it appears dry. Collect the spilled material and clean up the area. Place waste materials in a closed container suitable for disposal. Refer to Section 13 for disposal considerations.

## SECTION 7 – HANDLING & STORAGE

**Handling:** As required by employer code. Avoid contact with incompatible materials. Never add water to a corrosive. Always add corrosives to water. When mixing with water, stir small amounts in slowly. Use cold water to prevent excessive heat generation. Do not get in eyes or on skin or clothing. Do not breathe mists or fumes. Use only in a well-ventilated area or with respiratory protection. Do not swallow. Do not eat, drink, or smoke in work areas. Remove contaminated clothing and discard or wash before reuse. Maintain good industrial hygiene practices.

**Storage:** As required by employer code. Keep container closed when not in use. Store in a cool, dry, well-ventilated area. Store away from incompatible materials. Keep out of direct sunlight. Maintain good industrial hygiene practices.

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## SECTION 8 – PERSONAL PROTECTIVE EQUIPMENT & EXPOSURE CONTROLS

**Eye/Face Protection:** As required by employer code. Avoid contact. Wear chemical safety goggles and full face shield.

**Hand Protection:** As required by employer code. Avoid contact. Wear chemical resistant gloves. Select and use gloves based on the results of a workplace exposure assessment. Consult ACGIH or your glove manufacturer for selection of appropriate compatible materials.

**Skin Protection:** As required by employer code. Avoid contact. Wear appropriate equipment as necessary to prevent exposure. Select and use protective equipment based on the results of a workplace exposure assessment. Consult ACGIH or your equipment manufacturer for selection of appropriate compatible materials.

**Respiratory Protection:** As required by employer code. Do not breathe fumes. Wear appropriate respiratory protection if ventilation is not adequate. Select and use NIOSH approved respiratory equipment based on the results of a workplace exposure assessment.

**Ingestion:** Do not swallow. Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

**Ventilation:** Use only in a well-ventilated area or with respiratory protection.

**Engineering Controls:** Use process enclosures, local exhaust ventilation or other engineering controls to keep airborne levels below exposure limits. Use a corrosion-resistant ventilation system. Have a safety shower and eye-wash fountain readily available in the immediate work area.



### EXPOSURE LIMITS:

<u>Chemical Name</u>	<u>ACGIH TLV – CEILING</u>	<u>ACGIH TLV – 8 hr TWA</u>	<u>OSHA PEL - 8 hr TWA</u>
Sodium hydroxide	2 mg/m <sup>3</sup>	Not available	2 mg/m <sup>3</sup>

## SECTION 9 – PHYSICAL & CHEMICAL PROPERTIES

**Physical State:** Liquid

**pH:** ~14

**Vapour Density (Air = 1):** Not available

**Volatiles (Wt%):** Not available

**Viscosity:** Not available

**Solubility in Water:** Soluble

**Vapour Pressure:** Not available

**Boiling Point (°C/°F):** Not available

**Odour Threshold (ppm):** Not available

**Appearance; Odour:** Clear, colourless; odourless

**Flash Point (°C/°F - TCC):** Not available

**Autoignition Temperature (°C/°F):** Not available

**Evaporation Rate (Ether =1):** Not available

**Upper Explosive Limit (UEL):** Not available

**Lower Explosive Limit (LEL):** Not available

**Freezing/Melting Point (°C/°F):** Not available

**Specific Gravity (water =1):** Not available

**Coefficient of water/oil:** Not available

## SECTION 10 – STABILITY & REACTIVITY

**Chemical stability:** Stable. Hazardous polymerization will not occur.

**Incompatible Materials:** Oxidizing agents, acids, metals.

**Conditions to Avoid:** Never add water to a corrosive. Always add corrosives to water. When mixing with water, stir small amounts in slowly. Use cold water to prevent excessive heat generation.

**Hazardous Decomposition Products:** Oxides of carbon.

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## SECTION 11 - TOXICOLOGICAL INFORMATION

**Routes of Entry:** Eyes, Skin, Inhalation, Ingestion

### HEALTH EFFECTS FROM ACUTE EXPOSURE:

**Eyes:** Corrosive. Causes chemical burns. May cause blindness. Symptoms may include severe pain, tearing, and ulcerations.

**Skin:** Corrosive. Causes chemical burns. Symptoms may be delayed. Symptoms may include localized redness, swelling, itching, intense pain, blistering, ulceration, and tissue destruction.

**Inhalation:** Corrosive. Harmful or fatal. May cause chemical burns. Symptoms may include irritation, cough, and sore throat. May cause chemical pneumonitis. May cause pulmonary edema

**Ingestion:** Corrosive. Harmful or fatal. May cause chemical burns. May cause severe and permanent damage to the digestive tract.

### ACUTE TOXICITY DATA:

<u>Chemical &amp; CAS#</u>	<u>RTECS #</u>	Rat - Inhalation 4 hours <u>LC<sub>50</sub></u>	Rat - Ingestion <u>LD<sub>50</sub></u>
Sodium hydroxide (1310-73-2)	WB4900000	Not available	Not available

### HEALTH EFFECTS FROM CHRONIC EXPOSURE:

**Aggravation of Pre-existing Conditions:** Insufficient data available.

**Irritancy:** Corrosive. Hazardous by WHMIS/OSHA criteria.

**Sensitization:** Insufficient data available.

**Reproductive Effects:** Insufficient data available.

**Teratogenicity:** Insufficient data available.

**Mutagenicity:** Insufficient data available.

**Carcinogenicity:** Not hazardous by WHMIS/OSHA criteria. Not listed by IARC, ACGIH, OSHA, Prop 65.

**Toxicologically Synergistic Materials:** Not available.

## SECTION 12 - ECOLOGICAL INFORMATION

**Environmental Effects:** Harmful to aquatic organisms.

### Ecotoxicity data:

<u>Sodium hydroxide (1310-73-2):</u>	Rainbow trout - 96 hour LC50: 45.4 mg/L
	Mosquito fish - 96 hour LC50: 0.125 mg/L

**Ecofate Data:** Not determined.

## SECTION 13 – DISPOSAL CONSIDERATIONS

**Disposal:** Hazardous waste. Consult applicable regulations and authorities prior to disposal.

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**SECTION 14 - TRANSPORTATION**

**Transportation of Dangerous Goods (TDG)** Applicable for ground shipments only. ERGO2008 #154

Proper Shipping Name: SODIUM HYDROXIDE SOLUTION.  
 Class: 8  
 UN Number: UN1824  
 Packing Group: II



**US Department of Transportation (DOT)** Applicable for ground shipments only. ERGO2008 #154

Proper Shipping Name: SODIUM HYDROXIDE SOLUTION  
 Class: 8  
 UN Number: UN1824  
 Packing Group: II



**SECTION 15 - REGULATORY INFORMATION**

**CANADA:** The components of this product are listed on the Domestic Substances List (DSL) or are exempt.

This controlled product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and this MSDS contains all the information required by the CPR.

**WHMIS Classification:** E – Corrosive

**Hazardous Products Act - Ingredient Disclosure List (IDL):** Sodium hydroxide - 1%

**UNITED STATES:** The components of this product are listed on the Toxic Substances Control Act (TSCA) inventory list or are exempt.

**OSHA:** This product is considered Hazardous as defined by the OSHA Hazard Communication Standard Code of Federal Regulations, 29 CFR 1910.1200.

**Title III SARA/EPCRA Sections 311 & 312 - Hazard Categories:**

<u>Chemical</u>	<u>CAS#</u>	<u>Fire</u>	<u>Pressure</u>	<u>Reactivity</u>	<u>Acute</u>	<u>Chronic</u>
Sodium hydroxide	1310-73-2	No	No	No	Yes	No

**Title III SARA/EPCRA Section 313 - Toxic Chemicals – Toxic Release Inventory:** None listed.

**Title III SARA/EPCRA Sections 302 & 304 - Extremely Hazardous Substances - Threshold Planning Quantities:** No specific TPQs.

**CERCLA - Hazardous Substances – Reportable Quantities:** CAS 1310-73-2: 1000 lb/454 Kg RQ

**RCRA:** Hazardous Waste.

**Clean Air Act (CAA):**

Does not contain any hazardous air pollutants.  
 Does not contain any Class 1 Ozone depletors.  
 Does not contain any Class 2 Ozone depletors.

**Clean Water Act (CWA):**

CAS 1310-73-2 is listed as a Hazardous Substance under the CWA.  
 None of the chemicals in this product are listed as Priority Pollutants under the CWA.  
 None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

**SECTION 16 - OTHER INFORMATION**

**MSDS Prepared by:** Technical Service. Contact supplier for information.

**Date:** July 1, 2013

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