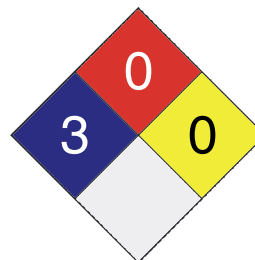


## 1. Product and Company Identification

<b>Product Name</b>	<b>MSDS Example</b>
<b>CAS #</b>	Mixture
<b>Product use</b>	Cleaner
<b>Manufacturer</b>	Dell Tech Laboratories Ltd. UWO Research Park 100 Collip Circle, Suite 220 London, ON N6G 4X8 CA Phone: 1-519-858-5021 Fax: 1-519-858-5026 Emergency Phone: 1-519-858-5021

LEGEND HMIS/NFPA	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

Health	/ 3
Flammability	0
Physical Hazard	0
Personal Protection	B



## 2. Hazards Identification

<b>Emergency overview</b>	DANGER -- CORROSIVE May cause chemical burns to eyes and skin.
<b>Potential short term health effects</b>	
<b>Routes of exposure</b>	Eye, Skin contact, Inhalation, Ingestion.
<b>Eyes</b>	May cause chemical burns. May cause blindness.
<b>Skin</b>	May cause chemical burns. Harmful contact may not cause immediate pain.
<b>Inhalation</b>	May cause respiratory tract irritation.
<b>Ingestion</b>	Harmful if swallowed. May cause chemical burns to mouth, throat and stomach.
<b>Target organs</b>	Eyes. Respiratory system. Skin.
<b>Chronic effects</b>	Prolonged or repeated exposure to dilutions can cause drying, defatting and dermatitis.
<b>Signs and symptoms</b>	The product causes burns of eyes, skin and mucous membranes.

## 3. Composition / Information on Ingredients

Ingredient(s)	CAS #	Percent
Sodium hydroxide	1310-73-2	30 - 60
Alcohols, C12-16, ethoxylated	68551-12-2	1 - 5

## 4. First Aid Measures

<b>First aid procedures</b>	
<b>Eye contact</b>	Immediately flush with cool water. Remove contact lenses, if applicable, and continue flushing for 15 minutes. Obtain medical attention immediately.
<b>Skin contact</b>	Immediately flush with water. Wash with soap and water. Obtain medical attention if irritation persists.
<b>Inhalation</b>	If symptoms develop move victim to fresh air. If symptoms persist, obtain medical attention.
<b>Ingestion</b>	Do not induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Obtain medical attention. Never give anything by mouth if victim is unconscious, or is convulsing.

**General advice**

If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Keep out of reach of children.

## 5. Fire Fighting Measures

<b>Flammable properties</b>	Not flammable by WHMIS/OSHA criteria.
<b>Extinguishing media</b>	
<b>Suitable extinguishing media</b>	Treat for surrounding material.
<b>Unsuitable extinguishing media</b>	Not available
<b>Protection of firefighters</b>	
<b>Specific hazards arising from the chemical</b>	Not available
<b>Protective equipment for firefighters</b>	Firefighters should wear full protective clothing including self contained breathing apparatus.
<b>Hazardous combustion products</b>	May include and are not limited to: Oxides of carbon. Oxides of sodium.
<b>Explosion data</b>	
<b>Sensitivity to mechanical impact</b>	Not available
<b>Sensitivity to static discharge</b>	Not available

## 6. Accidental Release Measures

<b>Personal precautions</b>	Keep unnecessary personnel away. Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak.
<b>Methods for containment</b>	Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas.
<b>Methods for cleaning up</b>	Before attempting clean up, refer to hazard data given above. Small spills may be absorbed with non-reactive absorbent and placed in suitable, covered, labelled containers. Prevent large spills from entering sewers or waterways. Contact emergency services and supplier for advice. Never return spills in original containers for re-use. Should not be released into the environment.

## 7. Handling and Storage

<b>Handling</b>	Use good industrial hygiene practices in handling this material. Do not get this material in your eyes, on your skin, or on your clothing.
<b>Storage</b>	Keep out of the reach of children. Store in a closed container away from incompatible materials.

## 8. Exposure Controls / Personal Protection

**Exposure limits**

Ingredient(s)	Exposure Limits
Alcohols, C12-16, ethoxylated	<b>ACGIH-TLV</b> Not established <b>OSHA-PEL</b> Not established
Sodium hydroxide	<b>ACGIH-TLV</b> Ceiling: 2 mg/m <sup>3</sup> <b>OSHA-PEL</b> TWA: 2 mg/m <sup>3</sup>

<b>Engineering controls</b>	General ventilation normally adequate.
<b>Personal protective equipment</b>	
<b>Eye / face protection</b>	Wear chemical goggles.
<b>Hand protection</b>	Rubber gloves. Confirm with a reputable supplier first.

<b>Skin and body protection</b>	As required by employer code.
<b>Respiratory protection</b>	Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.
<b>General hygiene considerations</b>	Use good industrial hygiene practices in handling this material. When using do not eat or drink. Wash hands before breaks and immediately after handling the product.

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## 9. Physical and Chemical Properties

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<b>Appearance</b>	Clear.
<b>Color</b>	Colorless
<b>Form</b>	Liquid
<b>Odor</b>	Strong
<b>Odor threshold</b>	Not available
<b>Physical state</b>	Liquid
<b>pH</b>	> 12
<b>Melting point</b>	Not available
<b>Freezing point</b>	Not available
<b>Boiling point</b>	212.00 °F (100 °C)
<b>Flash point</b>	Not available
<b>Pour point</b>	Not available
<b>Evaporation rate</b>	Not available
<b>Flammability limits in air, lower, % by volume</b>	Not available
<b>Flammability limits in air, upper, % by volume</b>	Not available
<b>Vapor pressure</b>	Not available
<b>Vapor density</b>	Not available
<b>Specific gravity</b>	Not available
<b>Octanol/water coefficient</b>	Not available
<b>Solubility (H2O)</b>	Complete
<b>Auto-ignition temperature</b>	Not available
<b>VOC (Weight %)</b>	Not available
<b>Viscosity</b>	Water thin
<b>Percent volatile</b>	Not available

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## 10. Stability and Reactivity

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<b>Chemical stability</b>	Stable under recommended storage conditions.
<b>Conditions to avoid</b>	Do not mix with other chemicals. Reacts violently with acids. This product may react with oxidizing agents.
<b>Incompatible materials</b>	Acids. Oxidizing agents.
<b>Hazardous decomposition products</b>	May include and are not limited to: Oxides of carbon. Oxides of sodium.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.

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## 11. Toxicological Information

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### Component analysis - LC50

Ingredient(s)	LC50
Alcohols, C12-16, ethoxylated	Not available
Sodium hydroxide	Not available

### Component analysis - Oral LD50

Ingredient(s)	LD50
Alcohols, C12-16, ethoxylated	1380 mg/kg rat
Sodium hydroxide	Not available

**Effects of acute exposure**

<b>Eye</b>	May cause chemical burns. May cause blindness.
<b>Skin</b>	May cause chemical burns. Harmful contact may not cause immediate pain.
<b>Inhalation</b>	May cause respiratory tract irritation.
<b>Ingestion</b>	Harmful if swallowed. May cause chemical burns to mouth, throat and stomach.
<b>Sensitization</b>	Non-hazardous by WHMIS/OSHA criteria.
<b>Chronic effects</b>	Non-hazardous by WHMIS/OSHA criteria.
<b>Carcinogenicity</b>	Non-hazardous by WHMIS/OSHA criteria.
<b>Mutagenicity</b>	Non-hazardous by WHMIS/OSHA criteria.
<b>Reproductive effects</b>	Non-hazardous by WHMIS/OSHA criteria.
<b>Teratogenicity</b>	Non-hazardous by WHMIS/OSHA criteria.
<b>Synergistic Materials</b>	Not available

**12. Ecological Information**

**Ecotoxicity** Components of this product have been identified as having potential environmental concerns.

**Ecotoxicity - Freshwater Fish Species Data**

Sodium hydroxide 1310-73-2 96 Hr LC50 Oncorhynchus mykiss: 45.4 mg/L [static]

<b>Environmental effects</b>	Harmful to aquatic life.
<b>Aquatic toxicity</b>	Not available
<b>Persistence / degradability</b>	Not available
<b>Bioaccumulation / accumulation</b>	Not available
<b>Partition coefficient</b>	Not available
<b>Mobility in environmental media</b>	Not available
<b>Chemical fate information</b>	Not available
<b>Other adverse effects</b>	Not available

**13. Disposal Considerations**

<b>Waste codes</b>	Not available
<b>Disposal instructions</b>	Dispose in accordance with all applicable regulations.
<b>Waste from residues / unused products</b>	Not available
<b>Contaminated packaging</b>	Not available

**14. Transport Information****U.S. Department of Transportation (DOT)****Basic shipping requirements:**

<b>Proper shipping name</b>	Sodium hydroxide solution
<b>Hazard class</b>	8
<b>UN number</b>	UN1824
<b>Packing group</b>	II
<b>Additional information:</b>	
<b>Special provisions</b>	B2, IB2, N34, T7, TP2
<b>Packaging exceptions</b>	154
<b>ERG number</b>	154



**Transportation of Dangerous Goods (TDG - Canada)**

**Basic shipping requirements:**

**Proper shipping name** SODIUM HYDROXIDE SOLUTION  
**Hazard class** 8  
**UN number** UN1824  
**Packing group** II



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## 15. Regulatory Information

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**Canadian federal regulations** This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

**Canada - WHMIS - Ingredient Disclosure List**

Sodium hydroxide 1310-73-2 1 %

**US Federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.  
All components are on the U.S. EPA TSCA Inventory List.

**U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities**

Sodium hydroxide 1310-73-2 1000 Lb final RQ; 454 kg final RQ

**U.S. - CWA (Clean Water Act) - Hazardous Substances**

Sodium hydroxide 1310-73-2 Present

**Occupational Safety and Health Administration (OSHA)**

**29 CFR 1910.1200 hazardous chemical** Yes

**CERCLA (Superfund) reportable quantity**

Sodium hydroxide: 1000.0000

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories** Immediate Hazard - Yes  
Delayed Hazard - No  
Fire Hazard - No  
Pressure Hazard - No  
Reactivity Hazard - No

**Section 302 extremely hazardous substance** No

**Section 311 hazardous chemical** Yes

**Clean Air Act (CAA)** Not available

**Clean Water Act (CWA)** Not available

**WHMIS status** Controlled

**WHMIS classification** Class E - Corrosive Material

**WHMIS labeling**



**State regulations**

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

**U.S. - California - 8 CCR Section 339 - Director's List of Hazardous Substances**

Sodium hydroxide 1310-73-2 Present

**U.S. - Louisiana - Reportable Quantity List for Pollutants**

Sodium hydroxide 1310-73-2 1000 Lb final RQ; 454 kg final RQ

**U.S. - Massachusetts - Right To Know List**

Sodium hydroxide 1310-73-2 Present

**U.S. - Minnesota - Hazardous Substance List**

Sodium hydroxide 1310-73-2 Present

**U.S. - New Jersey - Right to Know Hazardous Substance List**

Sodium hydroxide 1310-73-2 sn 1706

**U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances**

Sodium hydroxide 1310-73-2 1000 Lb RQ (air); 100 lb RQ (land/water)

**U.S. - Pennsylvania - RTK (Right to Know) List**

Sodium hydroxide 1310-73-2 Environmental hazard

**U.S. - Rhode Island - Hazardous Substance List**

Sodium hydroxide 1310-73-2 Toxic; Flammable

**Inventory name**

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

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## 16. Other Information

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**Disclaimer**

Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

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01-May-2010

**Expiry date**

01-May-2013

**Prepared by**

Dell Tech Laboratories Ltd. (519) 858-5021

**Other information**

For an updated MSDS, please contact the supplier/manufacturer listed on the first page of the document.