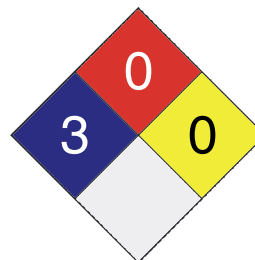


1. Product and Company Identification

Product Name	MSDS Example
CAS #	Mixture
Product use	Cleaner
Manufacturer	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

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

3. Composition / Information on Ingredients

Ingredient(s)	CAS #	Percent
Sodium hydroxide	1310-73-2	40 - 60
Alcohols, C12-16, ethoxylated	68551-12-2	2.5 - 10

4. First Aid Measures

First aid procedures	
Eye contact	Immediately flush with cool water. Remove contact lenses, if applicable, and continue flushing for 15 minutes. Obtain medical attention immediately.
Skin contact	Immediately flush with water. Wash with soap and water. Obtain medical attention if irritation persists.
Inhalation	If symptoms develop move victim to fresh air. If symptoms persist, obtain medical attention.
Ingestion	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

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

6. Accidental Release Measures

Personal precautions	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.
Methods for containment	Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas.
Methods for cleaning up	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

Handling	Use good industrial hygiene practices in handling this material. Do not get this material in your eyes, on your skin, or on your clothing.
Storage	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	ACGIH-TLV Not established OSHA-PEL Not established
Sodium hydroxide	ACGIH-TLV Ceiling: 2 mg/m ³ OSHA-PEL TWA: 2 mg/m ³

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

Skin and body protection	As required by employer code.
Respiratory protection	Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.
General hygiene considerations	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.

9. Physical and Chemical Properties

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

10. Stability and Reactivity

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

11. Toxicological Information

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

Eye	May cause chemical burns. May cause blindness.
Skin	May cause chemical burns. Harmful contact may not cause immediate pain.
Inhalation	May cause respiratory tract irritation.
Ingestion	Harmful if swallowed. May cause chemical burns to mouth, throat and stomach.
Sensitization	Non-hazardous by OSHA criteria.
Chronic effects	Non-hazardous by OSHA criteria.
Carcinogenicity	Non-hazardous by OSHA criteria.
Mutagenicity	Non-hazardous by OSHA criteria.
Reproductive effects	Non-hazardous by OSHA criteria.
Teratogenicity	Non-hazardous by OSHA criteria.
Synergistic Materials	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]
Environmental effects	Harmful to aquatic life.
Aquatic toxicity	Not available
Persistence / degradability	Not available
Bioaccumulation / accumulation	Not available
Partition coefficient	Not available
Mobility in environmental media	Not available
Chemical fate information	Not available

13. Disposal Considerations

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

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

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



15. Regulatory Information

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

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 status

Country(s) or region	Inventory name	On inventory (yes/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)

16. Other Information

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.

Issue date

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Effective date

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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.