

Sid Harvey item# PRO-BROWN

SDS# Pro-Brown
Date: October 2015

SDS Z0533

Total Pages: 6

Pro-Brown™

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Pro-Brown Outdoor Coil Cleaner- Extra Heavy Duty**Catalog Number:** Pro-Brown**Manufactured by:** DiversiTech Corporation
6650 Sugarloaf Parkway
Duluth, GA, 30097**Information Phone No.:** 1+678.542.3600**EMERGENCY Phone No.:** 1 800.255.3924 Chem-Tel (Chemical Emergencies)**PREPARED BY:** V. Leone

SECTION 2. HAZARDOUS IDENTIFICATION

GHS Classification:

Skin Irritation Category 1B

Eye Irritation Category 1

Label Elements:

**Signal Word** Danger!

Hazard Statement(s)

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

Precautionary statement(s)

P102 Keep out of reach of children.

P103 Read label before use.

P260 Do not breathe mist or spray.

P264 Wash thoroughly after handling.

P280 Wear rubber, neoprene or nitrile gloves and protective clothing, and safety goggle or a face shield to protect eyes and face.

Response

P301+330+331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+361+353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse SKIN with water or shower.

P363 Wash contaminated clothing before reuse.

P304+340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER or doctor.

P405 Store locked up

P501 Dispose of contents and container to appropriate facility in accordance with Federal, State, and local regulations.

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SECTION 3. HAZARDOUS INGREDIENTS INFORMATION

INGREDIENT	CAS No.	EINECS No.	% or Range	GHS Classification
Water	7732-18-5	231-791-2	60-80	Not classified
Sodium hydroxide	1310-73-2	215-185-5	15-20	H314: Skin Corrosion Category 1A H318: Eye Damage Category 1 H402: Aquatic Acute Category 3
Sodium Carbonate	497-19-8	207-838-8	1-3	H315: Skin Irritant Category 2 H319: Eye Irritant Category 2A
Sodium Gluconate	527-07-1	208-407-7	1-3	H515: Skin Irritant Category 3 H319: Eye Irritant Category 2B
Tetrasodium EDTA	64-02-8	200-573-9	0-1	H302: Harmful if swallowed Category 4 H318: Causes serious eye damage Category 1

SECTION 4. FIRST AID MEASURES

4.1. Description of first aid measures

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Ingestion: Rinse mouth. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Skin Contact: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse.

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

Note to Physician: Perform endoscopy in all cases of suspected sodium hydroxide ingestion. In cases of severe esophageal corrosion, consider the use of therapeutic doses of steroids. General supportive measures with continual monitoring of gas exchange, acid-base balance, electrolytes, and fluid intake are also required.

4.2. Signs and Symptoms of Exposure:

Inhalation: Effects from inhalation of mist and spray may cause serious damage of the upper respiratory tract, depending on severity of exposure. Symptoms may vary from mild to severe irritation, sneezing, sore throat or runny nose. Severe pneumonitis may occur.

Ingestion: Symptoms may include burns of mouth, throat, and stomach bleeding, vomiting, diarrhea, fall in blood pressure.

Skin Contact: Contact with skin can cause redness, irritation or severe burns and scarring with greater exposures.

Eye Contact: Contact with mist, spray or liquid causes redness, severe irritation or burning in eyes. Prolonged exposures can cause burns that may result in permanent impairment of vision, even blindness.

Chronic Exposure: Prolonged contact with dilute solutions or mists has a destructive effect upon tissue.

SECTION 5. FIREFIGHTING MEASURES

Suitable and Unsuitable Extinguishing Media:

This product is not flammable. However, sodium hydroxide solutions can react with non-ferrous metals to generate flammable hydrogen gas. Use dry chemical, carbon dioxide, or foam. Use water to cool fire-exposed containers and to protect personnel. Do not direct a solid stream of water or foam into hot, burning pools. This may result in frothing and increase fire intensity.

Special Equipment and Precautions for Fire-Fighters:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face-piece operated in the pressure demand or other positive pressure mode.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures: Ventilate area of leak or spill. Keep unnecessary and unprotected people away from area of spill. Wear appropriate personal protective equipment and clothing during clean-up.

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SECTION 6. ACCIDENTAL RELEASE MEASURES (cont.)

Methods and Material for Containment and Clean-Up: Contain and recover liquid when possible. Do not flush caustic residues to the sewer. Residues from spills can be diluted with water, then neutralized with dilute acid such as acetic, hydrochloric or sulfuric. Absorb neutralized caustic residue on clay, vermiculite or other inert substance and package in a suitable container for disposal. Do not use aluminum tools to collect absorbed material or aluminum containers to store collected waste. US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities (700 gallons) of this product. The toll free number for the US Coast Guard National Response Center is (800) 424-8802. Remove contaminated clothing immediately.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling: Keep in a tightly closed container. Protect from physical damage. Keep this and all chemicals out of the reach of children. Avoid contact with eyes and skin. Avoid inhalation of vapors and mists. Wash thoroughly after handling.

Conditions for Safe Storage, Including any Incompatibilities: Store locked up. Protect from freezing. Containers of this material may be hazardous when empty since they retain product residues. Do not store with aluminum or magnesium. Do not mix with acids or organic materials. Observe all warnings and precautions listed for the product.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Airborne Exposure Limits:

Sodium Hydroxide:

OSHA Permissible Exposure Limit (PEL): 15 mg/m³ Ceiling

ACGIH Threshold Limit Value (TLV): 15 mg/m³ Ceiling

Appropriate Engineering Controls:

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators: If the exposure limit is exceeded and engineering controls are not feasible, a half face piece particulate respirator (NIOSH type N95 or better filters) may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full-face piece particulate respirator (NIOSH type N100 filters) may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency, or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-face piece positive-pressure, air-supplied respirator. WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection: Wear rubber, neoprene, nitrile, Saranex® boots, gloves, lab coat, apron or coveralls, as necessary and appropriate, to prevent skin contact.

Eye Protection: Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities or a source of running water in the work area.

Work Hygienic Practices: Use proper industrial hygiene practices to minimize hazardous exposure. Wash hands after handling this material, and before eating, smoking or using the bathroom.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Dark brown liquid
Odor:	Faint molasses-like
Odor Threshold:	Not established
pH @ 25°C:	14
Melting Point (Pour Point) :	<25°F
Boiling Point :	> 220°F
Flash Point:	Not established
Evaporation Rate (Water = 1):	>1
Flammable Limits:	Not established
LEL:	N/A
UEL:	N/A
Vapor pressure (mm Hg):	Same as water
Vapor Density (Air = 1):	Same as water
Specific gravity (H₂O = 1):	1.190
Solubility in water:	Water miscible
Octanol/Water Partition Coefficient:	Not available
Autoignition Temperature:	Not available
Decomposition Temperature:	Not available

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SECTION 10. STABILITY AND REACTIVITY

Chemical Stability: Stable under ordinary conditions of use and storage.

Possibility of Hazardous Reactions: Will not occur.

Conditions to Avoid: Extreme heat, incompatibles.

Incompatible Materials: Sodium hydroxide in contact with acids and organic halogen compounds, especially trichloroethylene, may cause violent reactions. Contact with nitro methane and other similar nitro compounds causes formation of shock-sensitive salts. Contact with metals such as aluminum, magnesium, tin, and zinc cause formation of flammable hydrogen gas. Sodium hydroxide, even in fairly dilute solution, reacts readily with various sugars to produce carbon monoxide.

Hazardous Decomposition Products: Sodium oxide. Decomposition by reaction with non-ferrous metals releases flammable and explosive hydrogen gas.

SECTION 11. TOXICOLOGICAL INFORMATION

Potential Health Effects:

Inhalation: Effects from inhalation of mist and spray may cause serious damage of the upper respiratory tract, depending on severity of exposure. Symptoms may vary from mild to severe irritation, sneezing, sore throat or runny nose. Severe pneumonitis may occur.

Ingestion: Symptoms may include burns of mouth, throat, and stomach bleeding, vomiting, diarrhea, fall in blood pressure.

Skin Contact: Contact with skin can cause redness, irritation or severe burns and scarring with greater exposures.

Eye Contact: Contact with mist, spray or liquid causes redness, severe irritation or burning in eyes. Prolonged exposures can cause burns that may result in permanent impairment of vision, even blindness.

Chronic Exposure: Prolonged contact with dilute solutions or mists has a destructive effect upon tissue.

Carcinogenic effects: Not classified

Teratogenicity/Reproductive toxicity: Not classified

Mutagenic effects: Not classified

Numerical Measures of Toxicity:

Sodium hydroxide (irritation data): Skin, rabbit: 500 mg/24H severe;
Eye rabbit: 50 ug/24H severe.

Sodium Carbonate (acute toxicity): Oral, LD50, rat: >2,000 mg/kg
Inhalation, rat: 2.3 mg/l 2h

(chronic toxicity): Inhalation, rat, target organ: lungs, 0.07 mg/l,
observed effect. No effect on reproduction.
Irritation: Rabbit, non-irritant (skin).
Rabbit, irritant (eyes).

Sodium Gluconate: ivn-rbt LDLo: 7630 mg/kg

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity: Sodium hydroxide: Fish: Carp: 180ppm (LC100); 24H;

Aquatic: This product is toxic to Aquatic Life. Toxicity is primarily associated with pH.

Persistence and Degradability: Biodegradable

Bioaccumulative Potential: No data available

Mobility in Soil: No data available. Can be dangerous if allowed to enter drinking water intakes. Do not contaminate domestic or irrigation water supplies, lakes, streams, ponds, or rivers.

Other Adverse Effects: None known

Other: For more information, see "HANDBOOK OF ENVIRONMENTAL FATE AND EXPOSURE DATA."

SECTION 13. DISPOSAL CONSIDERATIONS

Dispose of spill clean-up and other wastes in accordance with Federal, State, and local regulations. Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Treat empty containers as hazardous. Dispose of container and unused contents in accordance with federal, state and local requirements. **RCRA Hazard Class (if discarded):** CORROSIVE D002.

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SECTION 14. TRANSPORTATION INFORMATION

US DOT: UN3266, Corrosive liquid, basic, inorganic, N.O.S. (contains sodium hydroxide), 8, PGII
DOT Proper Shipping Name: Corrosive liquid, basic inorganic, N.O.S. (contains sodium hydroxide)
DOT Hazard Class: 8
UN Number: UN3266
Packing Group: II
IMO: UN3266, Corrosive liquid, basic, inorganic, N.O.S. (contains sodium hydroxide), 8, PGII
Limited Quantity: No
Marine Pollutant: No
ADR/RID Class: 8
ADR/RID Packing Group: II
IMDG Hazard Class: 8
IMDG Packing Group: II
ADNR Class: 8
ADNR Item: UN3266
IATA Hazard Class: 8
IATA Packing Group: II
 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable

SECTION 15. REGULATORY INFORMATION

US EPA

Comprehensive Environmental Response Compensation and Liability

Act of 1980 (CERCLA) requires notification of the National Response Center of release quantities of Hazardous Substances is not required for this material.

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires emergency planning based on threshold planning quantities and release reporting based on reportable quantities in 40 CFR 355 (used for SARA 302, 304, 311, and 312) is not required for quantities below 250 pounds.

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires submission of annual reports of release of toxic chemicals that appear in 40 CFR 372 (for SARA 313). This material is not subject to reporting requirements.

Toxic Substances Control Act (TSCA) Status: The ingredients of this product is not listed on the TSCA inventory.

State Right to Know

California Proposition 65: This product does not contain any materials on the Proposition 65 List of Chemicals Known to Cause Cancer or Reproductive Toxicity.

Massachusetts: Hazardous substances and extraordinarily hazardous substances must be identified.

Pennsylvania: Hazardous substances must be identified.

California SCAQMD Rule 443.1 (VOC's): None

Chemical Inventory Status

Canada

Ingredient	TSCA	EC	Japan	Australia	Korea	DSL	NDSL	Phil.
Sodium Hydroxide (1310-73-2)	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes

Federal, State & International Regulations

Ingredient	SARA 302	SARA 313	TSCA	CERCLA 261.33 8(d)
Sodium Hydroxide (1310-73-2)	RQ	TPQ	Chemical RCRA List -	
	No	No	No 1000	No

Sodium Hydroxide (1310-73-2)

Chemical Weapons Convention: No

TSCA 12(b): No CDTA: No

SARA 311/312: Acute: Yes Chronic: Yes Fire: No Pressure: No Reactivity: Yes (Mixture / Liquid)

Australian Hazchem Code: 2R

Poison Schedule: S6

WHMIS:

This SDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by the CPR.

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SECTION 16. OTHER INFORMATION:

Revision Summary: All Sections: New GHS Format

SDS DATE REVISED: 10/09/2015

RCRA Hazard Class (if discarded): CORROSIVE D002.

HMIS III Ratings

HMIS III®

Health	3
Flammability	0
Physical Hazard	1
Personal Protection	I

This information is, to the best of our knowledge and belief, accurate and reliable as of the date completed. However no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the completeness and suitability of such information for his own particular use. We do not accept liability for any loss or damage that may occur from the use of this information, nor do we offer any warranty against patent infringement.

MSDS Number – Z0533

Manufacturers Product Name: Pro-Brown Outdoor Coil Cleaner-
Extra Heavy Duty

Sid Harvey Item number – PRO-BROWN

SDS# Pro-Brown
Date: March 2015

Total Pages: 7

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SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Pro-Brown Outdoor Coil Cleaner- Extra Heavy Duty
Catalog Number: Pro-Brown
Manufactured by: DiversiTech Corporation
6650 Sugarloaf Parkway
Duluth, GA, 30097
Information Phone No.: 1+678.542.3600
EMERGENCY Phone No.: 1 800.255.3924 Chem-Tel (Chemical Emergencies)
SDS DATE REVISED: 03/12/2015
PREPARED BY: V. Leone

SECTION 2. HAZARDOUS IDENTIFICATION

GHS Classification:

Skin Irritation Category 1
Eye Irritation Category 1
Carcinogen Category 2
Specific Target Organ Toxicity- Single Exposure Category 3
Specific Target Organ Toxicity- Repeat Exposure Category 2

Label Elements:



Contains Sodium Hydroxide

Signal Word Danger!

Hazard Statement(s)

H301 Toxic if swallowed.
H311 Toxic in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

Precautionary statement(s)

P102 Keep out of reach of children.
P103 Read label before use.
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P232 Protect from moisture.
P233 Keep container tightly closed.
P235 Keep cool.
P260 Do not breathe mist or spray.
P262 Do not get in eyes, on skin, or on clothing.
P264 Wash thoroughly after handling.
P280 Wear rubber, nitrile or neoprene protective gloves and clothing, and safety goggles or face shield to protect eyes and face.
P285 In case of inadequate ventilation wear respiratory protection.

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SECTION 2. HAZARDOUS INGREDIENTS INFORMATION (cont.)

P308	IF exposed or concerned: Consult medical advice or attention
P309	IF you feel unwell: Consult medical advice or attention
P301	IF SWALLOWED: Immediately drink 3 or 4 glasses of water followed by a large glass of citrus juice. Do not induce vomiting. Call a physician immediately.
P302	IF ON SKIN: Flush affected area with water for 15 minutes or until skin no longer feels slick. If irritation persists or burns are present, consult a physician.
P304	IF INHALED: Remove person to fresh air. If unconscious or if breathing does not return to normal within a few minutes, contact a physician immediately.
P305	IF IN EYES: Flush eyes with running water for at least 15 minutes while lifting lids periodically. Call a physician without delay.
P402	Store in a dry place.
P403	Store in a well-ventilated place.
P501	Treat empty containers as hazardous. Dispose of spill clean up and other wastes in accordance with Federal, State, and local regulations. Consign any recovered product not suitable for reuse or recycling to an appropriate and approved waste treatment or disposal facility. Although not a listed RCRA hazardous waste, this material may exhibit one or more characteristics of a hazardous waste and require appropriate analysis to determine specific disposal requirements. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

HMIS III Ratings

HMIS III®

Health	3
Flamability	0
Physical Hazard	1
Personal Protection	I

SECTION 3. HAZARDOUS INGREDIENTS INFORMATION

INGREDIENT	CAS No.	EINECS No.	% or Range	GHS Classification
Water	7732-18-5	231-791-2	60-80	Not classified
Sodium hydroxide	1310-73-2	215-185-5	15-20	H314- Acute Toxicity Category 4 H314- Skin Corrosion Category 1A H318- Eye Damage Category 1 H402- Aquatic Acute Category 3
Sodium Carbonate	497-19-8	207-838-8	1-3	H315: Skin Irritant Category 2 H319: Eye Irritant Category 2A
Sodium Gluconate	527-07-1	208-407-7	1-3	H515: Skin Irritant Category 3 H319: Eye Irritant Category 2B
Tetrasodium EDTA	64-02-8	200-573-9	0-1	H302: Harmful if swallowed Category 4 H318: Causes serious eye damage Category 1

SECTION 4. FIRST AID MEASURES

4.1. Description of first aid measures

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Ingestion: DO NOT INDUCE VOMITING! Give large quantities of water or milk if available. Never give anything by mouth to an unconscious person. Get medical attention immediately.

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SECTION 4. FIRST AID MEASURES (cont.)

Skin Contact: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician, immediately. Wash clothing before reuse.

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

Note to Physician: Perform endoscopy in all cases of suspected sodium hydroxide ingestion. In cases of severe esophageal corrosion, consider the use of therapeutic doses of steroids. General supportive measures with continual monitoring of gas exchange, acid-base balance, electrolytes, and fluid intake are also required.

4.2. Signs and Symptoms of Exposure:

Inhalation: Effects from inhalation of mist and may cause serious damage of the upper respiratory tract, depending on severity of exposure. Symptoms may vary from mild to severe irritation, sneezing, sore throat or runny nose. Severe pneumonitis may occur.

Ingestion: Symptoms may include burns of mouth, throat, and stomach bleeding, vomiting, diarrhea, fall in blood pressure.

Skin Contact: Contact with skin can cause redness, irritation or severe burns and scarring with greater exposures.

Eye Contact: Contact with mist, spray or liquid causes redness, severe irritation or burning in eyes. Prolonged exposures can cause burns that may result in permanent impairment of vision, even blindness.

Chronic Exposure: Prolonged contact with dilute solutions or mists has a destructive effect upon tissue.

SECTION 5. FIREFIGHTING MEASURES

Suitable and Unsuitable Extinguishing Media:

This product is not flammable. However, sodium hydroxide solutions can react with non-ferrous metals to generate flammable hydrogen gas. Use dry chemical, carbon dioxide, or foam. Use water to cool fire-exposed containers and to protect personnel. Do not direct a solid stream of water or foam into hot, burning pools. This may result in frothing and increase fire intensity.

Special Equipment and Precautions for Fire-Fighters:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face-piece operated in the pressure demand or other positive pressure mode.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures: Ventilate area of leak or spill. Keep unnecessary and unprotected people away from area of spill. Wear appropriate personal protective equipment and clothing during clean-up.

Methods and Material for Containment and Clean-Up: Contain and recover liquid when possible. Do not flush caustic residues to the sewer. Residues from spills can be diluted with water, then neutralized with dilute acid such as acetic, hydrochloric or sulfuric. Absorb neutralized caustic residue on clay, vermiculite or other inert substance and package in a suitable container for disposal. Do not use aluminum tools to collect absorbed material or aluminum containers to store collected waste. US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities (700 gallons) of this product. The toll free number for the US Coast Guard National Response Center is (800) 424-8802. Remove contaminated clothing immediately.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling: Keep in a tightly closed container. Protect from physical damage. Keep this and all chemicals out of the reach of children. Wash thoroughly after handling.

Conditions for Safe Storage, Including any Incompatibilities: Store in a cool, dry, ventilated area away from sources of heat, moisture and incompatible materials. Protect from freezing. Containers of this material may be hazardous when empty since they retain product residues. Do not store with aluminum or magnesium. Do not mix with acids or organic materials.

Observe all warnings and precautions listed for the product.

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SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Airborne Exposure Limits:

OSHA Permissible Exposure Limit (PEL): 15 mg/m³ Ceiling

ACGIH Threshold Limit Value (TLV): 15 mg/m³ Ceiling

Appropriate Engineering Controls:

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation. A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH Approved): If the exposure limit is exceeded and engineering controls are not feasible, a half face piece particulate respirator (NIOSH type N95 or better filters) may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full-face piece particulate respirator (NIOSH type N100 filters) may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency, or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-face piece positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.



Skin Protection: Wear rubber, neoprene, nitrile, Saranex® boots, gloves, lab coat, apron or coveralls, as necessary and appropriate, to prevent skin contact.

Eye Protection: Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities or a source of running water in the work area.

Work Hygienic Practices: Use proper industrial hygiene practices to minimize hazardous exposure. Wash hands after handling this material, and before eating, smoking or using.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Dark brown liquid

Odor: Faint molasses-like

Odor Threshold: Not established

pH @ 25°C: 14

Melting Point (Pour Point): <25°F

Boiling Point: > 220°F

Flash Point: Not established

Evaporation Rate (Water = 1): >1

Flammable Limits: Not established

LEL: N/A

UEL: N/A

Vapor pressure (mm Hg): Same as water

Vapor Density (Air = 1): Same as water

Specific gravity (H₂O = 1): 1.190

Solubility in water: Water miscible

Octanol/Water Partition Coefficient: Not available

Autoignition Temperature: Not available

Decomposition Temperature: Not available

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability: Stable under ordinary conditions of use and storage.

Possibility of Hazardous Reactions: Will not occur.

Conditions to Avoid: Extreme heat, incompatibles.

Incompatible Materials: Sodium hydroxide in contact with acids and organic halogen compounds, especially trichloroethylene, may cause violent reactions. Contact with nitromethane and other similar nitro compounds causes formation of shock-sensitive salts. Contact with metals such as aluminum, magnesium, tin, and zinc cause formation of flammable hydrogen gas. Sodium hydroxide, even in fairly dilute solution, reacts readily with various sugars to produce carbon monoxide.

Hazardous Decomposition Products: Sodium oxide. Decomposition by reaction with non-ferrous metals releases flammable and explosive hydrogen gas.

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SECTION 11. TOXICOLOGICAL INFORMATION

Potential Health Effects:

Inhalation: Effects from inhalation of mist and may cause serious damage of the upper respiratory tract, depending on severity of exposure. Symptoms may vary from mild to severe irritation, sneezing, sore throat or runny nose. Severe pneumonitis may occur.

Ingestion: Symptoms may include burns of mouth, throat, and stomach bleeding, vomiting, diarrhea, fall in blood pressure.

Skin Contact: Contact with skin can cause redness, irritation or severe burns and scarring with greater exposures.

Eye Contact: Contact with mist, spray or liquid causes redness, severe irritation or burning in eyes. Prolonged exposures can cause burns that may result in permanent impairment of vision, even blindness.

Chronic Exposure: Prolonged contact with dilute solutions or mists has a destructive effect upon tissue.

Carcinogenic effects: Not classified

Teratogenicity/Reproductive toxicity: Not classified

Mutagenic effects: Not classified

Numerical Measures of Toxicity:

Sodium hydroxide (irritation data): Skin, rabbit: 500 mg/24H severe;
Eye rabbit: 50 ug/24H severe.

Sodium Carbonate (acute toxicity): Oral, LD50, rat: 2,000 mg/kg
Inhalation, rat: 2.3 mg/l 2h

(chronic toxicity): Inhalation, rat, target organ: lungs, 0.07 mg/l,
observed effect. No effect on reproduction.
Irritation: Rabbit, non-irritant (skin).
Rabbit, irritant (eyes).

Sodium Gluconate: ivn-rbt LDLo: 7630 mg/kg

Tetrasodium EDTA: skin-rbt: 500mg/24H MOD
Eye-rbt: 1900 µg
Eye-rbt: 100 mg/24H MOD
ipr.mus LD50: 330 mg/kg

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity: Sodium hydroxide: Fish: Carp: 180ppm (LC100); 24H;

Aquatic: This product is toxic to Aquatic Life. Toxicity is primarily associated with pH.

Persistence and Degradability: Not expected to biodegrade or bio-concentrate

Bioaccumulative Potential: No data available

Mobility in Soil: No data available. Can be dangerous if allowed to enter drinking water intakes. Do not contaminate domestic or irrigation water supplies, lakes, streams, ponds, or rivers.

Other Adverse Effects: None known

Other: For more information, see "HANDBOOK OF ENVIRONMENTAL FATE AND EXPOSURE DATA."

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SECTION 13. DISPOSAL CONSIDERATIONS

Dispose of spill clean-up and other wastes in accordance with Federal, State, and local regulations. Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Treat empty containers as hazardous. Dispose of container and unused contents in accordance with federal, state and local requirements. **RCRA Hazard Class (if discarded):** CORROSIVE D002.

SECTION 14. TRANSPORTATION INFORMATION

US DOT: UN3266, PGII, 8, Corrosive liquid, basic, inorganic, N.O.S. (contains sodium hydroxide)

International (Water, I.M.O.)

UN Number: UN3266

DOT Proper Shipping Name: Corrosive liquid, basic inorganic, N.O.S. (contains sodium hydroxide)

DOT Hazard Class: 8

Packing Group: II

Limited Quantity: No

Marine Pollutant: No

ADR/RID Class: 8

ADR/RID Packing Group: II

IMDG Hazard Class: 8

IMDG Packing Group: II

ADNR Class: 8

ADNR Item: 8

IATA Hazard Class: 8

IATA Packing Group: II

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable

SECTION 15. REGULATORY INFORMATION

U.S. EPA

Comprehensive Environmental Response Compensation and Liability

Act of 1980 (CERCLA) requires notification of the National Response Center of release quantities of Hazardous Substances is not required for this material.

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires emergency planning based on threshold planning quantities and release reporting based on reportable quantities in 40 CFR 355 (used for SARA 302, 304, 311, and 312) is not required for quantities below 250 pounds.

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires submission of annual reports of release of toxic chemicals that appear in 40 CFR 372 (for SARA 313). This material is not subject to reporting requirements.

Toxic Substances Control Act (TSCA) Status: The ingredients of this product are on the TSCA inventory.

State Right to Know

California Proposition 65: This product does not contain any materials on the Proposition 65 List of Chemicals Known to Cause Cancer or Reproductive Toxicity.

Massachusetts: Hazardous substances and extraordinarily hazardous substances must be identified.

Pennsylvania: Hazardous substances must be identified.

California SCAQMD Rule 443.1 (VOC's): None

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SECTION 15. REGULATORY INFORMATION (cont.)

Chemical Inventory Status

Ingredient	Canada							
	TSCA	EC	Japan	Australia	Korea	DSL	NDSL	Phil.
Sodium Hydroxide (1310-73-2)	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes

Federal, State & International Regulations

Ingredient	SARA 302		SARA 313		TSCA		CERCLA 261.33 8(d)	
	RQ	TPQ	Chemical	RCRA	List -			
Sodium Hydroxide (1310-73-2)	No	No	No	1000	No	No		

Chemical Weapons Convention: No

TSCA 12(b): No CDTA: No

SARA 311/312: Acute: Yes Chronic: Yes Fire: No Pressure: No Reactivity: Yes (Mixture / Liquid)

Australian Hazchem Code: 2R

Poison Schedule: S6

WHMIS:

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

SECTION 16. OTHER INFORMATION:

Revision Summary: All Sections: New GHS Format

This information is, to the best of our knowledge and belief, accurate and reliable as of the date completed. However no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the completeness and suitability of such information for his own particular use. We do not accept liability for any loss or damage that may occur from the use of this information, nor do we offer any warranty against patent infringement.