Safety Data Sheet

Section 01 - Identification

Product Identifier	ClearBase 46
Other Means of Identification	None
Product Use and Restrictions on Use	Acid neutralization, petroleum refining, manufacture of paper products, metal cleaning, regeneration of ion exchange resins, absorbent for carbon dioxide and hydrogen sulfide.
Initial Supplier Identifier	ClearTech Industries Inc. 1500 Quebec Avenue Saskatoon, SK. Canada S7K 1V7
Prepared By	ClearTech Industries Inc. Technical Writer Phone: 1 (800) 387-7503
24-Hour Emergency Phone	Phone: 1 (306) 664 – 2522

Section 02 - Hazard Identification

GHS-Classification

Acute Toxicity-Oral	Category 4
Skin Corrosion/Irritation	Category 1A
Serious Eye Damage/Irritation	Category 1

Physical Hazards

Corrosive to Metals	Category 1

Danger

Hazard Statements
H302 – Harmful if swallowed.
H314 – Causes severe skin burns and eye damage.
H290 – May be corrosive to metals.

Pictograms

Precautionary Statements
P234 – Keep only in original container.
P280 – Wear protective gloves, protective clothing, eye protection, and face protection.
P305 + P351 + P338 – 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/physician.
P260 – Do not breathe mist, vapours or spray.
P264 – Wash hands thoroughly after handling.
P270 – Do not eat, drink or smoke when using this product.
P301 +P330 + P331 – IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 – IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin
P363 – Wash contaminated clothing before reuse.
P304 + P340 – IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P405 – Store locked up.
P390 – Absorb spillage to prevent material damage.
P501 – Dispose of contents/container in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.

Section 03 - Composition / Information on Ingredients

Chemical Name	CAS Number	Weight %	Unique Identifiers
Potassium Hydroxide	1310-58-3	15-25%	
Sodium Hydroxide	1310-73-2	25-35%	

Section 04 - First Aid Measures

Inhalation

If symptoms are experienced remove victim to fresh air. Give artificial respiration only if breathing has stopped. If breathing is difficult, give oxygen. Seek immediate medical attention.

Skin Contact / Absorption

Remove contaminated clothing. Immediately flush with lukewarm, gently flowing water for at least 60 minutes. Seek immediate medical attention. Completely decontaminate clothing, shoes and leather goods before re-use or discard.

Eye Contact

Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for at least 60 minutes, while holding the eyelid(s) open. If a contact lens is present, remove only if easy to do so. Neutral saline solution may be used as soon as it is available. Seek immediate medical attention.

Ingestion

Never give anything my mouth if victim is rapidly losing consciousness, is unconscious or convulsing. Have victim rinse mouth thoroughly with water. DO NOT INDUCE VOMITING. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Have victim rinse mouth with water again. Seek immediate medical attention.

Additional Information

Probable mucosal damage may contraindicate the use of gastric lavage.

Section 05 - Fire Fighting Measures

Suitable Extinguishing Media

Where fire is involved use any firefighting agent that is appropriate extinguishing media for material that is supplying the fuel to the fire.

Unsuitable Extinguishing Media

Carbon dioxide.

Specific Hazards Arising From the Chemical

Contact with metals such as aluminum, tin, zinc may form flammable hydrogen gas.

Special Protective Equipment and Precautions for Fire-Fighters

Wear NIOSH-approved self-contained breathing apparatus and protective clothing. Protective clothing and pressure demand, self-contained breathing apparatus should be worn by fire fighters in areas where product is

Further Information

Not Available

Section 06 - Accidental Release Measures

Personal Precautions / Protective Equipment / Emergency Procedures	Wear appropriate personal protective equipment. Ventilate area. Only enter area with PPE. Stop or reduce leak if safe to do so. Flush with water to remove any residue.
Environmental Precautions	Completely contain spilled material with dikes or sandbags and prevent run-off into ground or surface waters or sewers.
Methods and Materials for Containment and Cleaning Up	Recover as much material as possible into containers for disposal. Recovered solids or liquids may be sent to a licensed reclaimer or dispose of in a permitted waste management facility. Remaining material may be neutralized with dilute hydrochloric or acetic acid. Neutralization products, both liquid and solid, must be recovered for disposal. LARGE SPILLS: Contact fire and emergency services and supplier for advice.

Section 07 - Handling and Storage

Precautions for Safe Handling	This material is EXTREMELY CORROSIVE and HIGHLY REACTIVE. Use proper equipment for lifting and transporting all containers. Use sensible industrial hygiene and housekeeping practices. Wash thoroughly after handling. Avoid all situations that could lead to harmful exposure. When diluting with water, slowly add caustic blend solution to cold water with mixing as heat will be produced during dilution and to avoid spattering.
Conditions for Safe Storage	Store in watertight containers in a cool dry place. Keep containers closed when not in use and when empty. Inspect periodically for deficiencies such as damage or leaks and away from incompatible materials.
Incompatibilities	Aluminum, tin, zinc, sodium borohydride, chlorine dioxide, nitrosomethylurea, tetrahydrofuran, maleic anhydride, nitrogen trichloride, nitroalkanes, 2,4,6,-trinitrotoluene, ammonium hexachloroplatinate, nitroaryl compounds, nitrobenzene, 2-nitrophenol, acetaldehyde, acrolein, acrylonitrile, allyl alcohol, 1,2-dichloroethylen, trichloroethylene, tetrachloroethane, phosphorus, potassium peroxodisulfate, hyponitrous acid, sugars, minerals acids, acetic acid, chloroform, methanol, cyanogen azide, silver nitrate, ammonia, zirconium, zinc dust, cinnamaldehyde.

Section 08 - Exposure Controls and Personal Protection

Exposure Limit(s)

Component	Regulation	Type of Listing	Value
Potassium Hydroxide	ACGIH	TLV-C	2mg/m^3
	OSHA	PEL-C	2mg/m^3
Sodium Hydroxide	ACGIH	TLV-C	2mg/m^3
	OSHA	PEL-C	2mg/m^3

Engineering Control(s)

Ventilation Requirements	Mechanical ventilation (dilution or local exhaust), process or personnel enclosure and control of process conditions should be provided. Supply sufficient replacement air to make up for air removed by exhaust systems.
Other	Emergency shower and eyewash should be in close proximity.

Protective Equipment

Eyes/Face	Chemical goggles, full-face shield, or a full-face respirator should be worn at all times when product is handled. Contact lenses should not be worn; they may contribute to severe eye injury.

Hand Protection	Impervious gloves of chemically resistant material (rubber or PVC) should be worn at all times. Wash contaminated clothing and dry thoroughly before reuse.
Skin and Body Protection	Body suite, aprons, and/or coveralls of chemical resistant material should be worn at all times. Wash contaminated clothing and dry thoroughly before reuse. Impervious boots of chemically resistant material should be worn at all times. No special footwear is required other than what is mandated at place of work.
Respiratory Protection	Where concentrations exceed or are likely to exceed 2 mg/m3 use a NIOSH approved high-efficiency particulate filter with full face piece or self-contained breathing apparatus. Follow any applicable respirator use standards and regulations.
Thermal Hazards	Not Available

Section 09 - Physical and Chemical Properties

Appearance

Physical State	Liquid
Colour	Clear to white/light grey viscous liquid
Odour	Odourless
Odour Threshold	Not Applicable

Property

pH	Strong base
Melting Point/Freezing Point	-18°C
Initial Boiling Point and Boiling Range	>130°C
Flash Point	Not Applicable
Evaporation Rate	Not Applicable
Flammability	Non-Flammable, however the product can react with metals such as aluminum, tin, zinc to form flammable and explosive hydrogen gas.
Upper Flammable Limit	Not Applicable
Lower Flammable Limit	Not Applicable
Vapour Pressure (mm Hg, 20^{o}C)	Not Available
Vapour Density (Air=1)	Not Available
Relative Density	Not Available
Solubility(ies)	100% in water
Partition Coefficient: n-octanol/water	Not Available
Auto-ignition Temperature	Not Applicable
Decomposition Temperature	Not Available
Viscosity	Not Available

Explosive Properties	Contact with metals such as aluminum, tin, zinc may form explosive hydrogen gas.
Specific Gravity (Water=1)	1.450-1.550 at 20°C
% Volatiles by Volume	Not Available
Formula	Blend
Molecular Weight	Not Available

Section 10 - Stability and Reactivity

Reactivity	Reacts vigorously or violently with many organic and inorganic materials. Will react with aluminum, tin, zinc or sodium borohydride forming hydrogen gas. Mixing with water can cause spattering and release of large amounts of heat.
Stability	Normally stable. Will absorb carbon dioxide from the air to form potassium carbonate
Possibility of Hazardous Reactions	None reported.
Conditions to Avoid	Water, moisture, generation of dust.
Incompatible Materials	Aluminum, tin, zinc, sodium borohydride, chlorine dioxide, nitrosomethylurea, tetrahydrofuran, maleic anhydride, nitrogen trichloride, nitroalkanes, 2,4,6,-trinitrotoluene, ammonium hexachloroplatinate, nitroaryl compounds, nitrobenzene, 2-nitrophenol, acetaldehyde, acrolein, acrylonitrile, allyl alcohol, 1,2-dichloroethylen, trichloroethylene, tetrachloroethane, phosphorus, potassium peroxodisulfate, hyponitrous acid, sugars, minerals acids, acetic acid, chloroform, methanol, cyanogen azide, silver nitrate, ammonia, zirconium, zinc dust, cinnamaldehyde.
Hazardous Decomposition Products	Sodium oxide and potassium oxide fumes may be generated by thermal decomposition at high temperatures.

Section 11 - Toxicological Information

Acute Toxicity Estimate

Component	Oral LD_{50}	Dermal LD_{50}	Inhalation LC_{50}
ClearBase 46	568 mg/kg	2,739 mg/kg	Not Available

This product has been classified in accordance with the Hazardous Products Regulations using ATE formula documented in the GHS standard.

Chronic Toxicity – Carcinogenicity

Component	IARC
ClearBase 46	None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, or OSHA, as a carcinogen.

Skin Corrosion/Irritation	Corrosive to skin. Capable of producing burns, blisters, ulcers and permanent scarring.
Ingestion	Swallowing this material may be harmful or cause death. Harmful effects include burns and permanent damage to the digestive tract, including the mouth, throat, stomach and intestines. Symptoms may include severe abdominal pain and vomiting of blood. Blood loss through damaged tissue can lead to low blood pressure and shock.
Inhalation	Breathing of mist is possible. Breathing this material is harmful and can cause death. Harmful effects include burns and permanent damage to the airways, including the nose, throat and lungs.

Serious Eye Damage/Irritation	Corrosive to eye. Capable of producing severe eye burns and permanent injury, including blindness, depending on the concentration of the solutions and duration of contact.
Respiratory or Skin Sensitization	Not known to be a skin sensitizer.
Germ Cell Mutagenicity	Available evidence does not suggest that mixture is a mutagen.
Reproductive Toxicity	No risk for reproductive toxicity is expected.
STOT-Single Exposure	Not Available
STOT-Repeated Exposure	Not Available
Aspiration Hazard	Inhalation at concentrations higher than 2mg/m³ may cause burns and tissue damage in upper respiratory tract. Pnuemonitis can result from inhalation at high concentrations. Severe scarring of throat can occur after swallowing. Death may result from ingesting product.
Synergistic Materials	Not Available

Section 12 – Ecological Information

Ecotoxicity

Component	Toxicity to Algae	Toxicity to Fish	Toxicity to Daphnia and Other Aquatic Invertebrates
Potassium Hydroxide	Not Available	LC_{50}(Mosquito fish, 48 hrs): 80 mg/L	Not Available
Sodium Hydroxide	Not Available	LC_{50}(Carassius auratus, 24hr): 160mg/L	EC_{50}(Ceriodaphnia dubia, 48hr): 40.38mg/L

Biodegradability	Does not biodegrade.
Bioaccumulation	Not Available
Mobility	Not Available
Other Adverse Effects	May cause shifts in water pH outside the range of pH 5 -10. This change may be toxic to aquatic organisms.

Section 13 – Disposal Considerations

Waste From Residues/Unused Products	Dispose in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.
Contaminated Packaging	Dispose in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.

Section 14 – Transport Information

UN Number	UN3266
UN Proper Shipping Name	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (Sodium hydroxide)
Transport Hazard Class(es)	8
Packaging Group	II
Environmental Hazards	Not listed as a marine pollutant under Canadian TDG Regulations, schedule III.
Special Precautions	Not Available
Transport in Bulk	Not Available

Additional Information

Packing Group	Limited Quantity Index
I	0
II	1 L
III	5 L

TDG

Other Secure containers (full and/or empty) with suitable hold down devises during shipment and ensure all caps, valves, or closures are secured in the closed position.

TDG PRODUCT CLASSIFICATION: This product has been classified on the preparation date specified at section 14 of this MSDS / SDS, for transportation in accordance with the requirements of part 2 of the Transportation of Dangerous Goods Regulations. If applicable, testing and/or published test data regarding the classification of this product are listed in the references at section 16 of this MSDS / SDS.

Section 15 – Regulatory Information

NOTE: THE PRODUCT LISTED ON THIS SDS HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CANADIAN CONTROLLED PRODUCTS REGULATIONS. THIS SDS CONTAINS ALL INFORMATION REQUIRED BY THOSE REGULATIONS.

Section 16 – Other Information

Preparation Date January 25, 2016

Note: The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations.

Attention: Receiver of the chemical goods / SDS coordinator

As part of our commitment to the Canadian Association of Chemical Distributors (CACD) Responsible Distribution® initiative, ClearTech Industries Inc. and its associated companies require, as a condition of sale, that you forward the attached Safety Data Sheet(s) to all affected employees, customers, and end-users. ClearTech will send any available supplementary handling, health, and safety information to you at your request.

If you have any questions or concerns please call our customer service center.

References:

1) CHEMINFO
2) TOXNET
3) Transportation of Dangerous Goods Canada
4) HSDB
5) ECHA

ClearTech Industries Inc. - Locations

Corporate Head Office: 1500 Quebec Avenue, Saskatoon, SK, S7K 1V7
Phone: 1(306) 664 – 2522
Fax: 1(888) 281-8109

www.cleartech.ca

24 Hour Emergency Number - All Locations – 1(306) 664-2522