SAFETY DATA SHEET

Section 1: Identification

Product Name:	Potassium Hydroxide (all sizes, all containers, all grades)
Chemical Name/Synonyms:	Potassium Hydroxide, Anhydrous Potassium Hydroxide, Caustic Soda, Caustic Potash Flake, Dry Caustic Potash, Dry Caustic Potash Flake, KOH
Company:	ESSENTIAL DEPOT, INC. 4605 Oak Circle Sebring, FL 33870 863.662.0481 www.EssentialDepot.com
Emergency Contact:	CHEMTREC from Inside the USA: 800.424.9300 CHEMTREC International: 703.741.5970
Product Use:	Intermediate industrial manufacturing such as: chemical peel of fruits/vegetables, detergents/soaps, pH adjustment, potassium fertilizers, dyeing, bleaching, potassium carbonate or other potassium salts and organic chemicals, alkaline batteries, paint and varnish removers, electroplating, photoengraving, lithography, analytical chemistry, organic synthesis, alkalizer, catalyst for biodiesel production, absorption of CO2, SO3, and NO3 in gas streams, drilling mud additive.
Note:	Produced in a non-mercury cell process. Meets ANSI/AWWA B511-10 and Food Chemical Codex (FCC) test requirements; however, this product is not product under all cGMP requirements of the FDA so users should evaluate their requirements of cGMP.

Section 2: Hazard(s) Identification

GHS Label Elements:

Signal Word(s): Corrosive, Poison, Danger

Hazard Statements: Causes severe skin burns and eye damage. – H314, H318
May cause respiratory irritation. – H335

Pictograms:

Hazard Classification: 8 (Corrosive}

Precautionary Statements:

Prevention:

- Wear protective gloves or clothing. – P280
- Use only outdoors or in a well-ventilated area. – P271
- Do not breathe dust. – P260
- Wash hands thoroughly after handling. – P264
- Wash contaminated clothing before reuse. – P363

Response:

- Immediately call a POISON CENTER or doctor. – P310
- IF INHALED: Remove person to fresh air and maintain person in position comfortable for breathing.
- IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. – P301 + P330 + P331
- IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. - P303 + P361 + P353
- IF IN EYES: Rinse cautiously with water for several minutes.
- Remove contact lenses, if present and easy to do. Continue rinsing. - P305 + P351 + P338
- Specific treatment (see First Aid instruction). - P321

Storage:

- Store in a well-ventilated place. Keep container tightly closed. - P403 + P233
- Store locked up. – P405
- DO NOT store in an ALUMINUM container or permit contact with aluminum as aluminum will quickly corrode and flammable hydrogen gas will be generated.

Disposal:

Dispose of contents and container in accordance with all local, regional, national, and international regulations. – P501

Supplemental Label Elements:

- Do not taste or swallow.
- Wash thoroughly after handling.

Description of Other Hazard(s):

- Causes severe digestive tract burns.
- Mixing with water or other low pH material may cause splattering and/or an exothermic reaction.
- DO NOT store in an ALUMINUM container or permit contact with aluminum as aluminum will quickly corrode and flammable hydrogen gas will be generated.
- Material will absorb moisture from the atmosphere and therefore become wet.
- When wet material may be corrosive to metals.

GHS HAZARD CLASSIFICATION:	
Physical Hazards:	Corrosive to Metals
Eye Contact Hazard:	Category 1 - Causes serious eye damage. Direct contact with the eyes can cause irreversible damage, including blindness.
Skin Contact Hazard:	Category 1 - Causes severe burns.
Oral/Ingestion – ACUTE Toxicity:	Category 4 – Harmful if swallowed. Severely corrosive to the digestive tract. Causes severe burns. May cause irreversible damage to mucous membranes.
Hazards Not Otherwise Classified (HNOC):	Harmful to aquatic life.
OSHA Hazard(s):	Corrosive to Metals

Section 3: Composition/Information on Ingredients

Chemical Name	Synonym	CAS Number	% Concentration
Potassium Hydroxide*	-	1310-58-3	84 - 92
Water	-	7732-18-5	8 - 16

*Slight variations from batch to batch therefore stated in a range.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.

Section 4: First-Aid Measures

After skin contact: Immediately remove and isolate contaminated clothing. For minor skin contact, avoid spreading material on unaffected skin. In either case of contact with the substance, IMMEDIATELY FLUSH SKIN WITH RUNNING WATER FOR AT LEAST 15 MINUTES.

After eye contact: DO NOT RUB EYES. In case of contact with substance, immediately FLUSH EYES WITH RUNNING WATER FOR AT LEAST 15 MINUTES. If IN the eyes then IMMEDIATELY rinse cautiously with water for several minutes, EVEN IF THE RINSE MUST BE FORCED. Remove contact lenses, if present and easy to do. Continue rinsing.

After inhalation: MOVE EXPOSED PERSON TO FRESH AIR. If breathing is difficult, give oxygen. Do not use mouth-to-mouth method if victim inhaled the substance. Instead give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If not breathing, give artificial respiration.

After ingestion: DO NOT INDUCE VOMITING. IMMEDIATELY call a physician or poison control. Rinse mouth with water (only if the person is conscious). If vomiting, keep head low so that stomach content does not get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance.

Most important symptoms/effects, acute and delayed:

Potential Acute Symptoms

Skin: Causes severe burns.

Eyes: Causes serious eye damage. Direct contact with the eyes can cause irreversible damage, including blindness.

Respiratory: May cause corrosive burns - irreversible damage.

Ingestion: Severely corrosive to the digestive tract. Causes severe burns. May cause irreversible damage to mucous membranes.

Signs or Symptoms of over-exposure

Skin: Adverse symptoms may include the following:

- pain or irritation
- redness
- blistering may occur

Eyes: Adverse symptoms may include the following:

	• pain • watering • redness
Respiratory:	Adverse symptoms may include the following: • respiratory tract irritation • coughing
Ingestion:	Do not induce vomiting. Rinse mouth. Be alert for vomiting. Seek immediate medical attention if vomiting begins.

Most important symptoms/effects, acute and delayed	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation. Repeated or prolonged exposure to skin that causes irritation may cause a chronic dermatitis.
INDICATORS of the need for IMMEDIATE medical attention and/or special treatment needed	**Chemical burns:** Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed. **Swallowed/Ingested:** DO NOT INDUCE VOMITING. Rinse only the mouth but only if conscious. Seek immediate medical attention. Watch for vomiting and do not permit stomach content into lungs. **IN the Eyes:** Immediately flush with water for 15 continuous prior to seeding medical attention. Then seek medical attention to prevent permanent damage. Provide general supportive measures and treat symptomatically.

Section 5: Fire-Fighting Measures

Suitable extinguishing media:	**SMALL FIRE:** dry chemical powder, carbon dioxide or water spray **LARGE FIRE:** Use dry chemical powder, CO_2, alcohol-resistant foam or water spray (fog).
UNSUITABLE extinguishing media:	Do not use water jet.
Specific hazards arising from the chemical:	Hot containers may explode. Containers with the product inside may become hot and explode. Use water spray to keep containers cool.

Hazardous thermal decomposition products:	Depending on conditions, hazardous combustion products may occur and may react violently with reactive metals such as aluminum, zinc, magnesium, copper, etc. to release hydrogen gas which can form explosive mixtures in the air.
Special protective actions for fire-fighters:	Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible. SMALL FIRE: Move containers from fire area if this can be done without risk.
Special protective equipment for fire-fighters:	Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection. Use NIOSH approved positive-pressure self-contained breathing apparatus (SCBA) in pressure demand mode should be used to avoid inhalation of the product and by-products.
Sensitivity to Mechanical Impact:	Not sensitive.
Sensitivity to Static Discharge:	Not sensitive.
Lower Flammability Level (air):	Not flammable.
Upper Flammability Level (air):	Not flammable.
Flash Point:	Not flammable.
Auto-Ignition Temperature:	Undetermined.

Section 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel:	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders:	Do not touch or walk through spilled material. Wear appropriate personal protective equipment; avoid direct contact. Do not touch damaged container or spilled material. Ventilate the area before entry.

	Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). As an immediate precautionary measure, isolate spill or leak for at least 50 meters (150 feet) in all directions. Stay upwind/keep distance from source. Keep out of low areas. Do not allow water to enter container. Keep unauthorized personnel away.
Environmental precautions:	Avoid dispersal of spilled material as well as runoff and contact with soil, waterways, drains, and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil, or air).

Clean up containment methods and materials:

Small Spill:	Avoid dust generation. Carefully shovel or sweep up spilled material and place in suitable container. Neutralize residue with dilute acid and follow with a liberal covering of Sodium Bicarbonate or other acceptable drying agent.
Large Spill:	Avoid dust generation. Carefully shovel or sweep up spilled material and place in suitable container. Neutralize residue with dilute acid and follow with a liberal covering of Sodium Bicarbonate or other acceptable drying agent. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7: Handling and Storage

Protective Measures:	Handle and open container with care. Use only with adequate ventilation. Wear appropriate personal protective equipment. Avoid direct contact with the human body. Do not breathe dust. Do not get in eyes, on skin or on clothing. Do not ingest. Add this product only to water. Never add water to this product. Do not add to warm or hot water, a violent eruption or explosive reaction can result. Avoid contact with organic materials. Take any precaution to avoid mixing with strong acids. May cause fire or explosion. When making solutions or diluting, only add caustic soda slowly to surface of cold water while stirring. Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air. May react with various sugars to generate carbon monoxide. Hazardous carbon monoxide gas can form upon contact with food and beverage products in enclosed vessels and can cause death. Follow appropriate tank entry procedures (see ANSI Z117.1 - 2009 Safety Requirements for Confined Spaces). Empty containers retain product residue and can be hazardous. Do not reuse container. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.

Conditions for Safe Storage, including incompatibilities:	Ventilate the area before entry. Keep only in the original container. Keep container tightly closed and properly labeled. Keep away from incompatibles. Store in a dry, cool. and well-ventilated area. User should ensure that equipment and procedures are in place to ensure safe handling of the caustic at temperatures involved, which may include the need to heat or maintain temperature of the material. See Section 10 for incompatible materials before handling or use.

Section 8: Exposure Controls/personal Protection

Name	ACGIH TWA	ACGIH STEL	ACGIH Ceiling	ACGIH Skin Absorption	OSHA TWA (Vacated)	OSHA STEL (Vacated)	OSHA Ceiling (Vacated)
Potassium Hydroxide	---	---	2mg/m^3	---	---	---	2mg/m^3

OSHA (the non-regulatory U.S. Occupational Safety and Health Administration) limits, if shown, are the Vacated 1989 vacated by 58 FR 35338 of June 30, 1993. Any indicated OSHA Ceiling value reflects the exposure limit that shall not be exceeded. If the preferred instantaneous monitoring method is not feasible then the ceiling shall be assessed as a 15-minute time weighted average exposure which also shall not be exceeded [29CFR1910.1000(a)(1)].

ACGIH (the American Conference of Governmental Industrial Hygienists) is a voluntary organization of professional industrial hygiene personnel in government or education institutions in the U.S. "Threshold Limit Values" each year are developed and published by ACGIH for many (not all) chemicals, physical agents, and biological exposure indices.

Appropriate engineering controls:	Good general ventilation should be used. Ventilation rates should be matched to conditions. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.
Environmental exposure controls:	Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways. Follow best practice for site management and disposal of waste.

Hygiene measures:	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Eye/Face protection:	Wear chemical splash goggles and face shield. Provide emergency eyewash fountain and quick drench shower in the immediate work area.
Hand protection:	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
Body protection:	Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Other skin protection:	Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory protection:	If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Use of N95 is recommended.

Section 9: Physical and Chemical Properties

Form: Solid, granular, dustless, evenly sized micro beads

Color: Whitem Off-White

Odor: Odorless

Odor threshold: Not applicable

Molecular Formula: KOH

Molecular Weight: 56.11

pH: Not applicable

Melting point/melting range: 380 to 406°C (716 to 762.8°F)

Boiling point/boiling range: 1327°C (2420.6°F)

Flash point: not flammable

Evaporation rate: not applicable (ether=1)

Flammability: not flammable (solid, gas)

Upper/lower flammability limits (air)**:** not flammable

Auto ignition temperature: not determined

Danger of explosion: no, unless hit/drenched with water

Vapor pressure: 60 mmHg @ 1013°C (1855.4°F)

Vapor density: not applicable (air=1)

Relative Density/Specific Gravity: 2.044 @ 20°C (68°F) [Water = 1]

Solubility in Water: 121g/100g @ 25°C (77°F)

Viscosity: Not applicable

Volatility: 0%

Hygroscopic: Yes

Partition coefficient: n-octanol/Water: not information available

Section 10: Stability and Reactivity

Reactivity:	No dangerous reaction known under conditions of normal use. Soluble in water, releasing heat sufficient to ignite combustibles. Reacts with acids, giving off heat.
Chemical stability:	The product is stable under normal conditions.
Conditions to avoid:	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous polymerization will not occur. Avoid excessive heat. Incompatible materials.
Incompatible materials:	Flammable liquids Water Acids Halogenated compounds Reactive or incompatible with the following materials and may cause fire or explosion: Metals (Potassium Hydroxide attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air): Magnesium. Aluminum. Zinc. Tin. Chromium Compounds. Copper. Bronze. Brass, Acids. Organic Materials. Food Sugars (Potassium Hydroxide may react with various sugars to generate carbon monoxide).
Hazardous decomposition products:	Thermal decomposition can lead to release of toxic/corrosive fumes of potassium oxide.

Section 11: Toxicological Information

PRODUCT TOXICITY From manufacturer internal studies.				
Name	**Result**	**Species**	**Dose**	**Exposure**
Potassium Hydroxide 1310-58-3	LD50 Oral LD50 Dermal LD50 Inhalation	Rat Rat Rat	365 mg/kg No data available No data available	-

COMPONENT TOXICITY Populated by the LOLI database and may differ from product toxicity data above.				
Name	**Result**	**Species**	**Dose**	**Exposure**
Potassium Hydroxide 1310-58-3	LD50 Oral LD50 Dermal LD50 Inhalation	Rat Rat Rat	325 mg/kg No data available No data available	-

SENSITIZATION
Not available.

MUTAGENICITY
Conclusion/Summary: No evidence of mutagenic activity in bacteria reverse mutation assay (e.g. Ames test). In addition, both the in vitro and the in vivo genetic toxicity tests with the structurally related Sodium Hydroxide indicate no evidence of mutagenic activity. Furthermore, Potassium Hydroxide is not expected to be systemically available in the body under normal handling and use conditions.

CARCINOGENICITY
Conclusion/Summary: Valid carcinogenicity studies with animals are not available for Potassium Hydroxide. Systemic carcinogenicity is not expected to occur because Potassium Hydroxide is not expected to be systemically available in the body under normal handling and use conditions.

REPRODUCTIVE TOXICITY
Conclusion/Summary: Potassium Hydroxide is not expected to be systemically available in the body under normal handling and use conditions. For this reason it can be stated that the substance will not reach the fetus nor male and female reproductive organs.

TERATOGENICITY
Conclusion/Summary: Not available.

SPECIFIC TARGET ORGAN TOXICITY (repeated exposure)
Not available.

ASPIRATION HAZARD
Not available.

LIKELY ROUTES OF EXPOSURE
Routes of anticipated entry: Oral, Inhalation.

POTENTIAL ACUTE HEALTH EFFECTS	
NOTE: No acute toxicity (dermal or inhalation) data is available. Corrosive at concentrations of about 2% or greater. For this reason there is not need for further acute toxicity testing.	
Eye Contact:	Causes serious eye damage. Direct contact with the eyes can cause irreversible damage, including blindness.
Inhalation:	May cause corrosive burns - irreversible damage.
Skin Contact:	Causes severe burns.
Ingestion:	Severely corrosive to the digestive tract. Causes severe burns. May cause irreversible damage to mucous membranes.

SYMPTOMS RELATED TO THE PHYSICAL, CHEMICAL AND TOXICOLOGICAL CHARACTERISTICS	
NOTE: The severity of the tissue damage is a function of its concentration, the length of tissue contact time, and local tissue conditions. There may be a slight time delay before irritation and other effects occur subsequent to exposure.	
Eye Contact:	Adverse symptoms may include the following: pain watering redness
Inhalation:	Adverse symptoms may include the following: respiratory tract irritation coughing
Skin Contact:	Adverse symptoms may include the following: pain or irritation redness blistering may occur
Ingestion:	Adverse symptoms may include the following: stomach pains

DELAYED and IMMEDIATE and CHRONIC EFFECTS from SHORT and LONG TERM EXPOSURE	
NOTE: The severity of the tissue damage is a function of its concentration, the length of tissue contact time, and local tissue conditions. There may be a slight time delay before irritation and other effects occur subsequent to exposure.	
SHORT TERM:	
Potential Immediate Effects:	
Eye Contact:	Acute: Causes serious eye damage. Direct contact with the eyes can cause irreversible damage, including blindness
Inhalation:	Acute: May cause corrosive burns - irreversible damage.
Skin Contact:	Acute: Causes severe skin burns and eye damage.
Ingestion:	Acute: Material is destructive to tissue of the mucous membranes and upper respiratory tract.

Potential Delayed Effects:	
Eye Contact:	Chronic: Repeated or prolonged exposure to corrosive materials or fumes may cause conjunctivitis.
Inhalation:	Chronic: Repeated or prolonged exposure to corrosive fumes may cause bronchial irritation with chronic cough.
Skin Contact:	Chronic: Repeated or prolonged exposure to corrosive materials will cause dermatitis.
Ingestion:	Chronic: Can cause gastrointestinal disturbances.
LONG TERM:	
Potential Immediate Effects:	
	Not Available
Potential Delayed Effects:	
	Not Available
POTENTIAL CHRONIC HEALTH EFFECTS:	
General:	No known significant effects or critical hazards.
Carcinogenicity:	No known significant effects or critical hazards.
Mutagenicity:	No known significant effects or critical hazards.
Reproductive toxicity:	No known significant effects or critical hazards.

Section 12: Ecological Information (non-mandatory)

ECOTOXICITY

This product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Name:	**Result**	**Species**	**Exposure**
Potassium Hydroxide	Static LC50 80 mg/l	Gambusia Affinis	96 hours
	Static Bioassay at 20.3-20.7C EC50 60 mg/l	Daphnia magna	48 hours
Conclusion/Summary:		Alkaline and may raise the pH of surface waters with low buffering capacity. Exhibited moderate toxicity to aquatic organisms.	

BIODEGRADABILITY

Inorganic and not subject to biodegradation.

PERSISTENCE

Alkaline and therefore may raise the pH of surface waters with low buffering capacity. Material is believed to exist in the disassociated state in the environment.

BIOCONCENTRATION

Not expected to bioconcentrate in organisms because of the high water solubility.

BIOACCUMULATIVE POTENTIAL
A strong alkaline substance that dissociates completely in water to K+ and OH-. Not expected to bioconcentrate in organisms because of the high water solubility. Log Pow is not applicable for an inorganic compound that dissociates.

MOBILITY IN SOIL
Not expected to be absorbed in soil due to dissociation properties and high water solubility.

OTHER ADVERSE EFFECTS
The risk posed for the environment is essentially restricted to pH increase. Has exhibited slight toxicity to terrestrial organisms.

Section 13: Disposal Considerations (non-mandatory)

Disposal Methods:

Product waste: If possible: Reuse or Reprocess. Keep out of water supplies and sewers. Dispose of contents and container in accordance with all local, regional, national and international regulations.

Packaging waste: Dispose of contents and container in accordance with all local, regional, national and international regulations.

Section 14: Transport Information (non-mandatory)

	DOT Classification	IMDG / IMO	IATA
UN Number	1813	1813	1813
UN Proper Shipping Name	Potassium Hydroxide, solid	POTASSIUM HYDROXIDE, SOLID	Potassium Hydroxide, solid
Transport Hazard Class(es)	8 	8 	8 

Packing Group	II	II	II
Environmental Hazards	No.	No.	No.

Additional Information:		
DOT Classification:	Reportable Quantity	1000 lbs / 454 kg (Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (Reportable Quantity) transportation requirements.)
	Limited Quantity	Yes
	Packaging Instruction	**Exceptions:** 154 **Non-bulk:** 212 **Bulk:** 240
	Quantity Limitation	**Passenger aircraft/rail:** 15 kg **Cargo aircraft:** 50 kg
	Special Provisions	IB8 IP2 IP4 T3 TP33
IMDG:	Emergency Schedules	F-A S-B
IATA:	Quantity Limitation	**Passenger and Cargo Aircraft:** 15 kg Packaging instruction: 859 **Cargo Aircraft Only:** 50 kg Packaging instruction: 863 **Limited Quantities:** Passenger Aircraft: 5 kg Packaging instruction: Y844

Special precautions for user:

When transporting within user's own premises always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:

Poses risks from the point of view of safety (S) and contamination (P). Classified as "Y", presents a danger to marine resources or human health.

Section 15:

U. S. REGULATIONS

OSHA: Considered hazardous (29 CFR 1910.1200).

	PSM (29 CFR 1910.119) = not regulated.
CERCLA (EHS EPCRA)**:**	Considered hazardous (29 CFR 302.4, 102a/103). Reportable releases notify the state emergency response commission and local emergency planning and the Nation Response Center at 800.424.8802 or 202.426.2675. Final RQ: 1000 lbs. CERCLA Section 302 EHS EPCRA = Unlisted (Threshold Planning Quantity = unlisted). EPCRA 313 (40 CFR 372.65) = not regulated. EPCRA 311/312 (40 CFR 370.10) = acute health hazard.
U.S. DOT:	Regulated for Transport. Hazardous Substance RQ: 1000 lbs.
DHS (Department of Homeland Security)**:**	Components are not regulated.
FDA (Food and Drug Administration)**:**	G.R.A.S. (Generally Recognized as Safe) status under specific FDA regulations. Additional information is available at the FDA website. Not produced under ALL cGMP (Good Manufacturing Practices) as defined by the FDA.

SARA EHS Chemical (40 CFR 355.30)
Not regulated. Hazard categories aligned with GHS (2018).

STATE REGULATIONS	
STATE REGULATIONS:	
Massachusetts:	Right To Know Hazardous Substance List: Listed
Rhode Island:	Right to Know Hazardous Substances: Listed
New Jersey:	Right To Know Hazardous Substance List: 1571. Special Health Hazards Substance List: Corrosive. Environmental Hazardous Substance List: Not Listed.
Pennsylvania:	Right To Know Hazardous Substance List: Listed Right to Know Special Hazardous Substances: Not listed. Right to Know Environmental Hazardous Substances: Present.
California Prop 65:	Cancer Warning: Not listed. Male Reproductive Toxin: Not listed. Female Reproductive Toxin: Not listed.

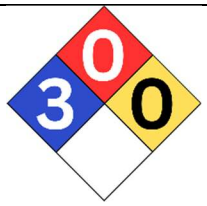
INTERNATIONAL INVENTORIES		
Country(s) or Region	**Inventory Name**	**In Inventory (Yes/No*)**
Australia	Australian Inventory of Industrial Chemicals (AICIS)	Yes
Canada	Domestic Substances List (DSL) (84% - 92%)	Yes
Canada	Non-Domestic Substances List (NDSL) (84% - 92%)	No

China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
U.S. and Puerto Rico	Toxic Substances Control Act (TSCA) Inventory (84% - 92%) Listed?	Yes
U.S. and Puerto Rico	Toxic Substances Control Act (TSCA) Inventory (84% - 92%) Active List?	Active
U.S. and Puerto Rico	Toxic Substances Control Act (TSCA) Inventory (84% - 92%) 12(b)	No
U.S. and Puerto Rico	Toxic Substances Control Act (TSCA) Inventory (84% - 92%) Section 4	No
U.S. and Puerto Rico	Toxic Substances Control Act (TSCA) Inventory (84% - 92%) Section 5	No
U.S. and Puerto Rico	Toxic Substances Control Act (TSCA) Inventory (84% - 92%) Section 6	No
U.S. and Puerto Rico	Toxic Substances Control Act (TSCA) Inventory (84% - 92%) Section 8	No

* "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s).
"No" indicates that one or more components of his product are not listed or exempt from listing on the inventory administered by the governing country(s).

Section 16:

Hazardous Material Information System (HMIS) ratings (U.S.A.):	**Health: 3**
	Flammability: 0
	Physical Hazard: 0

NFPA Ratings:	**Health: 3**
	**Flammability: 0**
	Physical Hazard: 0

Date of Last Revision: 11.30.2023
Previous Revision Dates: 03.02.2017, 05.21.2018, 05.07.2020
Date Created: 02.01.2016

KEY TO ABBREVIATIONS	
ATE	ATE = Acute Toxicity Estimate
AMP	Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift
BCF	Bioconcentration Factor
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
IATA	International Air Transport Association
IBC	Intermediate Bulk Container
IMDG	International Maritime Dangerous Goods
LowPow	logarithm of the octanol/water partition coefficient
MARPOL	International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("MARPOL" = marine pollution)
N/A	Not Available
RQ	Reportable Quantity
UN	United Nations

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