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## Safety Data Sheet Lightning

### 1. IDENTIFICATION

Synonyms none  
 CAS# see Part 3, below  
 Material Use laundry break

**IN AN EMERGENCY CALL: INFOTRAC 1-800-535-5053**

### 2. HAZARD IDENTIFICATION

GHS Class *skin corrosive*  
 (Category) *(1C)*  
 Signal Words **DANGER**

Hazard Statements *causes severe skin burns & eye damage (H314)*



#### GHS Precautionary Statements for Labeling

P262, P264 Do not get in eyes, on skin or on clothing. Wash thoroughly after handling.  
 P270, P280 Do not eat, drink or smoke when using this product. Wear eye protection and protective gloves of nitrile or rubber.  
 P313 & P333 If skin irritation or rash occurs, get medical advice/attention.  
 P305, P351, P338 If in eyes, rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

### 3. COMPOSITION

	CAS NUMBER	%	TLV ppm / mg/m <sup>3</sup>	LD <sub>50</sub> (mg/kg) ORAL	LD <sub>50</sub> (mg/kg) SKIN	LC <sub>50</sub> ppm INHALATION
Potassium Hydroxide	1310-58-3	10-20%	2mg/m <sup>3</sup>	>205	>1260	not known
Tetrapotassium Pyrophosphate	7320-34-5	5-10%	not listed	4640	not known	not known
Water	7732-18-5	balance	not toxic	90.000	not toxic	not toxic

### 4. FIRST AID

SKIN: Wash with plenty of water. Remove contaminated clothing and do not reuse until thoroughly laundered. Seek medical help promptly if there is persistent itching or redness in the affected area.  
 EYES: Wash eyes with plenty of water, holding eyelids open. Seek medical assistance if there is persistent irritation.  
 INHALATION: Remove from contaminated area promptly. **CAUTION: Rescuer must not endanger himself!** If victim's breathing stops, administer artificial respiration and seek medical aid promptly.  
 INGESTION: Give plenty of water to dilute product. Do not induce vomiting (NOTE below). Keep victim quiet. If vomiting occurs, lower victim's head below hips to prevent inhalation of vomited material. Seek medical help promptly.

**NOTE: Corrosive substance: first aid must be applied immediately!** Inadvertent inhalation of vomited material may seriously damage the lungs. The stomach should only be emptied under medical supervision, after the installation of an airway to protect the lungs.

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**EMERGENCY INFORMATION: INFOTRAC 1-800-535-5053**

**5. FLAMMABILITY & FIRE-FIGHTING**

Flash Point	cannot burn
Autoignition Temperature	cannot burn
Flammable Limits	cannot burn
Combustion Products	oxides of potassium & phosphorous
Firefighting Precautions	as for materials sustaining fire; compatible with water; firefighters must wear SCBA
Static Discharge	cannot accumulate a static charge

**6. ACCIDENTAL RELEASE MEASURES**

Leak Precaution	dike to control spillage and prevent environmental contamination
Handling Spill	recover free liquid with corrosion-resistant pumps; neutralize residue with sodium bicarbonate (baking soda), absorb any remaining liquid with an inert sorbent, sweep, shovel & store in closed containers for disposal

**7. HANDLING & STORAGE**

Store above freezing and away from strong acids. Never cut, drill, weld or grind on or near this container, whether empty or full. Always replace drum, pail or IBC cap prior to moving the container!

Avoid generating or breathing product mist. If mist forms in use, install adequate ventilation to clear workplace air. Avoid all skin contact & wash work clothes frequently. An eye bath & safety shower should be available near the workplace.

**8. EXPOSURE CONTROL & PERSONAL PROTECTION*****Potassium Hydroxide:***

ACGIH TLV	2mg/m <sup>3</sup>	ACGIH STEL	not listed
OSHA PEL	not listed	OSHA STEL	not listed
Ventilation	no special mechanical ventilation required		
Hands	nitrile or rubber gloves – <i>other types also protect; always confirm suitability with supplier</i>		
Eyes	safety glasses with side shields or chemical goggles – <i>always protect eyes!</i>		
Clothing	impermeable (hands, above) apron, boots, long sleeves, if splashing is anticipated		

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**NOTE:** for Flash Point, Autoignition Temperature & Flammable Limits see Part 5.

Odor & Appearance	clear, yellow, odorless liquid
Odor Threshold	not known – <i>odorless</i>
Vapor Pressure	as for water
Evaporation Rate ( <i>Butyl Acetate = 1</i> )	as for water
Vapor Density (air = 1)	0.6 ( <i>water</i> ) – <i>the only volatile component</i>
Boiling Point	not measured – approximately 110°C / 230°F
Freezing Point	not measured – approximately -10°C / 14°F
Decomposition Temperature	not known
Specific Gravity	1.115-1.25 (20/20°C)
Water Solubility	complete
Viscosity	not known – <i>mobile liquid</i>
pH	>13 – <i>strongly alkaline</i>

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**10. REACTIVITY**

Dangerously Reactive With	strong acids agents
Also Reactive With	protein (eg: leather, wool)
Chemical Stability	stable; will not polymerize
Decomposes in Presence of	no decomposition triggers known
Decomposition Products	none apart from Hazardous Combustion Products
Mechanical Impact	not sensitive

**11. TOXICITY INFORMATION****i. ACUTE EXPOSURE**

Skin Contact	corrosive to skin if not removed promptly
Skin Absorption	yes, slowly; toxic effects unlikely by this route
Eye Contact	corrosive to eyes, may damage eyes
Inhalation	product mist likely to be irritating to the respiratory system
Ingestion	corrosive to mouth, throat and stomach – <i>not a route of industrial exposure</i>
Calculated LD <sub>50</sub> (oral)	2200mg/kg (rat)
Calculated LD <sub>50</sub> (skin)	14,000mg/kg (rabbit)
LC <sub>50</sub> (inhalation)	<i>insufficient information to calculate</i>

**ii. CHRONIC EXPOSURE**

General	prolonged or repeated exposure to dilute material may cause dermatitis through removal of protective skin oils
Sensitizing	not a sensitizer
Carcinogen/Tumorigen	not known to be a tumorigen or a carcinogen in humans or animals
Reproductive Effect	no known effect on humans or animals
Mutagen	not known to be a mutagen or teratogen in humans or animals
Synergistic With	not known

**12. ECOLOGICAL INFORMATION****Potassium Hydroxide:**

Bioaccumulation	not a bioaccumulator
Biodegradation	cannot biodegrade
Abiotic Degradation	dilutes readily in water & neutralizes with dissolved CO <sub>2</sub> & atmospheric CO <sub>2</sub> to potassium carbonate;
Mobility in soil, water	product is water soluble & moves readily in soil and water
<b>Aquatic Toxicity</b>	
LC <sub>50</sub> (Fish, 96hr)	178mg/liter – <i>for 45% product (Gambusia affinis) – the pH of the test medium is not reported . . .</i>
EC <sub>50</sub> (Crustacea, 48hr)	<i>. . . no other ecotoxicity data available . . .</i>

**Tetrapotassium Pyrophosphate:**

Bioaccumulation	cannot bioaccumulate
Biodegradation	inorganic substance; cannot biodegrade; <i>phosphates are taken up avidly by plant life</i>
Abiotic Degradation	estimated ½-life to hydrolysis is over one year
Mobility in soil, water	water soluble; moves readily through soil & the water column
<b>Aquatic Toxicity</b>	
LC <sub>50</sub> (Fish 96 hr)	>100mg/liter (Oncorhynchus mykiss)
LC <sub>50</sub> (Crustacea, 48hr)	>100mg/liter (Daphnia magna)
NOEC (Algae)	>100mg/liter (Desmodesmus subspicatus)
NOEC (Bacteria)	>1000mg/liter ( <i>domestic sewage sludge</i> )

**cont'd next page****PLEASE ENSURE THAT THIS SDS IS GIVEN TO, AND EXPLAINED TO PEOPLE USING THIS PRODUCT.****EMERGENCY INFORMATION:      INFOTRAC 1-800-535-5053**

**13. DISPOSAL CONSIDERATIONS**

- Waste Disposal **do not flush undiluted to sewer**; neutralize with a waste acid; dispose of the neutral salt as appropriate (*a harmless salt like potassium acetate or potassium chloride may be accepted in a sanitary landfill*)
- Containers **Drums** should be reused. Recondition and pressure test by a licensed reconditioner prior to re-use.  
**Pails** must be vented and thoroughly dried prior to crushing and recycling.  
**IBCs** (intermediate bulk containers): polyethylene bottle must be pressure tested & recertified at 30 months. Replace at 60 months (5 years). Steel containers must be inspected, pressure tested & recertified every 5 years.  
**Warning: never cut, drill, weld or grind on or near this container, even if empty.**

**14. TRANSPORT INFORMATION****USA 49 CFR & Canada/International TDG**

Product Identification Number

Shipping Name

Classification

*Marine Pollution**ERAP Required**Reportable Quantity (RQ)*

UN – 3266

**Corrosive liquid, basic, inorganic N.O.S.  
(potassium hydroxide)****Class 8; Packing Group III***not a marine pollutant**No**11,000lbs (potassium hydroxide)***15. REGULATIONS**Canada DSL **on inventory**U.S.A. TSCA **on inventory**Europe EINECS **on inventory****16. OTHER INFORMATION**Date of Preparation **May 2015**Date of Revision **-**Prepared for Tomco-Harwel, by **Peter Bursztyn**

*With data from the Registry of Toxic Effects of Chemical Substances (RTECS), Hazardous Substance Data Base (HSDB), Cheminfo (CCOHS), OSHA, IUCLID Datasheets (European Chemical Substance Information System - ESIS), & others sources (below if used), as required/available*

***last page of SDS*****PLEASE ENSURE THAT THIS SDS IS GIVEN TO, AND EXPLAINED TO PEOPLE USING THIS PRODUCT.****EMERGENCY INFORMATION:      INFOTRAC 1-800-535-5053**