

1 – PRODUCT IDENTIFICATION

2 – HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:.....Use reasonable care in handling. Protect eyes, skin and avoid spills on clothing. Avoid excessive breathing of vapors. Maintain adequate vantilation.

CLASSIFICATION 29 CFR 1910.1200:Product is hazardous by OSHA criteria.

Corrosive to metals: Category 1 Acute toxicity, oral: Category 4 Skin corrosion/irritation: Category 1 Serious eye damage/eye: Category 1



GHS SIGNAL WORD:Danger

3500 Harry S. Truman Blvd. & St. Charles, MO 63301 & P:636.940.5445 & TP: 800.345.4399 & F:636.940.0773



GHS PRECAUTIONARY STATEMENTS:.....P234: Keep only in original packaging.

P280: Wear protective gloves/protective clothing/eye protection/face protection; when conditions warrant use, add face shield, apron, and/or rubber boots.
P270: Do not eat, drink or smoke when using this product
P260: Do not breathe dust/fume/gas/mist/vapors/spray.
P264: Wash ... thoroughly after handling, wash gloves and contaminated surfaces.
P301+330+331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P303+361+353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately, call a doctor.
P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing for 15 min. call a doctor.
P363: Wash contaminated clothing before reuse.
P391 : Collect spillage
P405: Store locked up

3 – COMPOSITION / INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENT Sodium Hydroxide

The exact percent by weight of the ingredients in this formulation is proprietary.

4 – FIRST-AID MEASURES

	Move to fresh air. If breating is difficult, give oxygen. If breathing stops, provide artificaial respiration. Do not use mouth to mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one way valve or other proper respiratory medica divice. Call a physician or poison control center immediately.	
	Call a physician or poison control center immediately. Do not induce vomiting.	
	Immediately rinse mouth and drink plenty of water. In vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Never give anything by mouth to an unconscious person. Do not use mouth to mouth method if victim ingested the substance.	
EYES:	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact	
	lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.	
	Take off immediately all contaminated clothing. Wash off IMMEDIATELY with plenty of water for at least 15-20 minutes. Get medical attention immediately! Wash clothing separately befor reuse. Destroy or thoroughly clean contaminated shoes.	
	Symptoms may include stinging, tearing, redness, swelling, and blurred vision.	
	Shortness of breath.	
IMMEDIATE OR SPECIAL TREATMENT:Provide general supportive measures and treat symptomatically.		
	Symptoms may be delayed. Keep victim under observation.	

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PERCENT 30-54 CAS NUMBER 1310-73-2



5 – FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA:......Water fog, foam, dry chemical powder, carbon dioxide(CO2). Use extinguishing agent suitable for type of surrounding fire.

SPECIAL FIRE FIGHTING PROCEDURES:In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Use water spray to coll unopened containers. DO NOT use a solid water stream as it may scatter and srpead fire. DO NOT use halgenated extinguishing agents. Fire fighters should enter the area only if they are protected from all contact with the material. full protective clothing, including self contained breathing apparatus, coat, pants, glvoes, boots and bands around legs, arms, and waist, should be worn. No skin surface should be exposed. The product itself does not burn. may decompose upon heating to produce corrsoive and/or toxic fumes. Contact with metal may release flammable hydrogen gas.

6 – ACCIDENTAL RELEASE MEASURES

SPILL PROCEDURES:.....LARGE SPILLS: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. following product recovery, flush area with water.
 SMALL SPILLS: Absorb spill with vermiculite or other inert material. Clean surface thoroughly to remove residual contamination. Never return spills in original containers for re-use.
 PERSONAL PRECAUTIONS:....Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Local authoriteis should be advised if significant spillages cannot be contained. Avoid discharge into drains, water courses or onto the ground.

7 – HANDLING and STORAGE

STORAGE:	Keep container tightly closed. Store in a cool, dry, well ventilated places. Store in corrosice resistant container with a resisteant inner liner. Store away from incompatible materials. Store at temperatures nto exceeding 40 C/104 F. Compatible storage materials may include, but not be limited to, the following: Nickel and nickel alloys, stell, plastic or rubber lined steel. Do not allow material to freeze.
HANDLING:	Use caution when combining with water; DO NOT add water to caustic; ALWAYS add caustic to water while stirring to minimize heat generation. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Do not breathe mist or vapor. Use only with adequate ventilation. Wear appropriate personal protective equipment. Transfer and storage systems should be compatible and corrosion resistant. Observe good industrial hygiene practices.



8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMITS:	No biological exposure limits noted for the ingredients.
PROTECTIVE CLOTHING:	Wear chemical goggles and face shield. Wear appropriate chemcials resistant gloves.
	Wear appropriate chemical resistant clothing.
ADDITIONAL MEASURES:	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation
	rates should be matched to conditions. If applicable, use process enclosures, local
	exhaust ventilation, or other engineering controls to maintain airborne levels below
	recommended exposure limits. If exposure limits have not been extablished, maintain
	airborne levels to an acceptable level. Eye wash facilites and emergency shower must
	be available when handling this product.
NOTE:	When using, do not eat, drink, or smoke. Always observe good personal hygine
	measures, such as washing agter handling the material and before eating, drinking,
	and/or smoking. Routinely wash work clothing and protective equipment to remove
	contaiminants.

9 – PHYSICAL / CHEMICAL PROPERITES

ODOR:Oderless

BOILING POINT:	266-284 F (130-140C)
VAPOR PRESSURE:	
VAPOR DENSITY (AIR=1):	
SPECIFIC GRAVITY:	Not available.
pH:	14
SOLUBILITY IN WATER:	Completely miscible in water.
FLAMMABILITY:	
EVAPORATION RATE:	Not avaiable.
MELTING POINT:	50-53 F (10-11.67)

10 – STABILITY and REACTIVITY



11 – TOXICOLOGICAL INFORMATION

LIKELY ROUTES OF EXPOSURE:Causes severe eye burns. Causes serious eye damage. Causes severe skin burns. May cause irritation to the respiratory system. Causes digestive tract burns. harmful if swallowed. TOXICOLOGICAL CHARACTERISTICS:Burning pain and severe corrosive skin damage. Permanent eye damage including blindness could result. DELAYED EFFECTS:No data available. IMMEDIATE EFFECTS:Causes severe eye and burns. Causes serious eye damage. CHRONIC EFFECTS:Prolonged exposure may cause chronic effects. NUMERICAL MEASURES OF TOXICITY:No data available. LISTED CARCINOGEN:The product is not considered to be a carcinogen by IARC, ACGIG, NTP, or OSHA.

INGREDIENTS	DATA
Dermal LD50 rabbit	Dermal LD50 rabbit > 2 g/kg
Oral LD50 rat	Oral LD50 rat 300-500 mg/kg
Other LD50 mouse	Other LD50 mouse 40 mg/kg intraperitoneal.

12 – ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE AND DISTRIBUTION: Harmful to aquatic life.

PRODUCT	DATA
Fish LC50	Bluegill (lepomis macrochirus) 99 mg/L, 48 hrs
	Mosquitofish (gambusia affinis) 125 mg/L, 96 hrs

PERSISTENCE AND DEGRADABILITY:Expected to degrade rapidly in air. **BIOACCUMULATIVE POTENTIAL:**The product is not expected to bioaccumulate.

MOBILITY IN SOIL:.....Not available.

OTHER ADVERSE EFFECTS: .. No other adverse environmental effects (e.g. ozone deptetion, photochemical ozone creation potential, endocrine disruption, global warning potential) are expected from this component.

13 – DISPOSAL CONSIDERATIONS

WASTE DISPOSAL:Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

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14 – TRANSPORTATION INFORMATION



ENVIRONMENTAL HAZARDS:.....according to Annex II of MARPOL. **TRANSPORT IN BULK:**....according to Annex II of MARPOL.

15 - REGULATIONS

Contents of this MSDS comply with the OSHA Hazard Communication Standard 29CFR 1910.1200

EPA SRA Title III Chemical Listings:

TSCA STATUS:All ingredients listed or exempt. SECTION 312:.....Hazardous Chemical SARA SECTION 313:....Not Listed. US EPA CERLA:Sodium hydroxide.

16 – OTHER INFORMATION

NFPA HAZARD RANKING

HEALTH	FIRE	REACTIVITY	SPECIAL
3	0	1	

HMIS HAZARD RANKING

HEALTH	FIRE	REACTIVITY	PPE
3	0	1	

This data is offered in good faith and believed to be accurate, but it is for the users to satify themselves of the product suitability for their own purpose. There is no warrenty expressed or implied. The recommended hygiene and safe handling procedures are believed to be generally applicable.

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