SAFETY DATA SHEET

Product Name : IWM-827 **Date Issued : August 3, 2016**

SECTION 1 : PRODUCT AND COMPANY IDENTIFICATION

Product Name: IWM-827
Formula : Multi-component mixture
Chemical Synonym / C# : c556
Chemical Family: Strong Alkaline Detergent

Supplier : Integrated Water Management Dryden, NY 13053
Information Telephone : (607)844-4276 **Emergency Telephone :** (607)529-3218

SECTION 2 : HAZARD IDENTIFICATION

Form : Liquid **Color :** Clear colorless
Emergency Overview : Corrosive! Causes severe burns on contact. Mists and vapors are irritating to the eyes, respiratory system and skin. Reacts with some metals to liberate hydrogen gas which can form explosive mixtures with air. Read the entire SDS for a more thorough evaluation of the hazards.
OSHA Hazard Communication Standard : This product has been evaluated and classified as defined by OSHA Hazard Communication Standard, 29CFR 1910.1200.
GHS Classification :

Corrosive to Metals (category 1)
Acute toxicity, oral (category 4)
Skin corrosion (category 1A)
Serious Eye Damage / Eye Irritation (category 1)
Hazardous to the aquatic environment (Category 3 acute hazard)

Signal Word : Danger

GHS Hazard Pictograms :  Corrosion,  Exclamation Mark

Hazard Statements :

H290 May be corrosive to metals.
H302 May be harmful if swallowed.
H314 Causes severe skin burns and eye damage
H318 Causes serious eye damage.
H402 Harmful to aquatic life.

Precautionary Statements :

P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.
P280 Wear protective gloves/eye protection/face protection.
P309 + P310 IF exposed or if you feel unwell: Immediately call a POISON CENTER or doctor/ physician.
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361+ P353 + P363 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse SKIN with water/ shower. Wash contaminated clothing before reuse.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P390 Absorb spillage to prevent material damage.

Precautionary Statements, continued :

P405 Store locked up.
P406 Store in corrosive resistant polypropylene container with a resistant inner liner.
P501 Dispose of contents/container to an approved waste disposal plant.

Other hazards which do not result in classification :

None known. See Section 11 for Potential Health Hazards

SECTION 3 : COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Ingredient(s)	CAS #	% (w/w)
Potassium Hydroxide	1310-58-3	5 - 10
Trisodium Phosphate	10101-89-0	10 - 15

Unlisted components are considered non-hazardous as per 29CFR1910.1200g2C. See section 15 for specific state right-to-know information if applicable.

SECTION 4 : FIRST AID MEASURES

General : In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Wash contaminated clothing before reuse.
Eye Contact: 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. Corrosive effects. May cause temporary blindness and severe eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.
Skin Contact: 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 before reuse. Destroy or thoroughly clean contaminated shoes.
Inhalation: Move to fresh air. Get medical attention if symptoms occur.
Ingestion: Call a physician or poison control center immediately. Rinse mouth. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Note to Physicians: Provide general supportive measures and treat symptomatically. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

SECTION 5 : FIRE FIGHTING MEASURES

Extinguishing Media: Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2). Use extinguishing agent suitable for type of surrounding fire. Do not use a solid water stream as it may scatter and spread fire. Do not use halogenated extinguishing agents.
Fire Fighting Procedures: 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, gloves, boots and bands around legs, arms, and waist, should be worn. No skin surface should be exposed. 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 cool unopened containers.
Unusual Fire and Explosion Hazards: The product itself does not burn. May decompose upon heating to produce corrosive and/or toxic fumes. Contact with metal may release flammable hydrogen gas.

SECTION 6 : ACCIDENTAL RELEASE MEASURES

Personal precautions : Keep unnecessary personnel away. Wear appropriate personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Local authorities should be advised if significant spillages cannot be contained. Heavier than water. Use suitable protective equipment (See Section 8 : "Exposure controls / personal protection").

Steps to be taken in case material is released or spilled:
Small Spill: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
Large Spill: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.
Never return spills in original containers for re-use. Retain and dispose of contaminated wash water. For waste disposal, see Section 13 of the SDS. Do not discharge into drains, water courses or onto the ground.
Deactivating Chemicals: Neutralize carefully with weak acid, such as HCl, to a pH of 6 - 9.

SECTION 7 : HANDLING AND STORAGE

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.
Storage Requirements: Keep container tightly closed. Store in a cool, dry, well-ventilated place. Store in corrosive resistant container with a resistant inner liner. Store away from incompatible materials (See Section 10). Store at temperatures not exceeding 40°C/104°F. Compatible storage materials may include, but not be limited to, the following: nickel and nickel alloys, steel, plastics, plastic or rubber-lined steel, FRP, or Derakane vinyl ester resin. Do not allow material to freeze.

SECTION 8 : EXPOSURE CONTROLS / PERSONAL PROTECTION

Hazardous Ingredient	ACGIH TLV (mg/m3) TWA	ACGIH TLV (mg/m3) STEL
Potassium Hydroxide	-	2 (ceiling)
Trisodium Phosphate	-	-

Engineering measures :

Ventilation / Local Exhaust / Mechanical Recommendations : Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV (s).

Personal protective equipment :

Respiratory Protection: If workplace exposure limit (s) of product or any component is exceeded (see exposure guidelines), a NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure type) under specified conditions (see your industrial hygienist). Engineering or administrative controls should be implemented to reduce exposure.

Personal protective equipment, continued :

Skin Protection: Wear resistant gloves (consult your safety equipment supplier). To prevent skin contact, wear impervious suit or impervious apron.

Eye Protection: Wear safety glasses with side shields (or goggles) and a face shield. Wear a full-face respirator, if needed.

Other Protective Equipment: Eye wash facilities and emergency shower must be available when handling this product. Vinyl apron (optional). Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

Appearance / Odor: Clear colorless liquid, odor nil.

Water Solubility: complete
pH (100%): > 12
Specific Gravity: 1.16
Boiling Point (°F) : 212+
Evaporation Rate(water=1): N/A
% Volatile: N/A
Vapor Density(air=1) : N/A
Vapor Pressure(mmHg): N/A
Flash Point : None
Flash Point Method Used: N/A
Flammable Limits: LEL = N/A **UEL =** N/A

SECTION 10 : STABILITY AND REACTIVITY

Chemical Stability: Material is stable under normal conditions.

Incompatibility with other Substances: Oxidizing agents. Acids. Phosphorus. Aluminum. Zinc. Tin. Initiates or catalyzes violent polymerization of acetaldehyde, acrolein or acrylonitrile.

Conditions to Avoid : Contact with metal may release flammable hydrogen gas. Reacts violently with strong acids. This product may react with oxidizing agents. Do not mix with other chemicals. Corrosive to aluminum, tin, zinc, copper and most alloys in which they are present including brass and bronze. Corrosive to steels at elevated temperatures above 40°C (104°F).

Hazardous Decomposition Products: Contact with metals (aluminum, zinc, tin) and sodium tetrahydroborate liberates hydrogen gas.

Hazardous Polymerization: Will not occur.

SECTION 11 : TOXICOLOGICAL INFORMATION

Potential Health Hazards as Potassium Hydroxide :

Eye Contact: Can cause permanent eye injury. Symptoms include stinging, tearing, redness, and swelling of eyes. Can injure the cornea and cause blindness.

Skin Contact: Can cause permanent skin damage. Symptoms may include redness, burning, and swelling of skin, burns, and other skin damage. The feeling of irritation or burning may be delayed following skin contact with 45% or 50% potassium hydroxide solutions. Contact with mist or dust may cause multiple small skin burns. Passage of this material into the body through the skin is possible, and may add to toxic effects from breathing or swallowing.

Inhalation: Breathing of vapor or mist is possible. Breathing this material may be harmful or fatal. Symptoms may include severe irritation and burns to the nose, throat, and respiratory tract. Symptoms usually occur at air concentrations higher than the recommended exposure limits (See section 2).

Ingestion: Swallowing this material may be harmful or fatal. Symptoms may include severe stomach and intestional irritation (nausea, vomiting, diarrhea), abdominal pain, and vomiting of blood. Swallowing this material may cause burns and destroy tissue in the mouth, throat, and digestive tract. Low blood pressure and shock may occur as a result of severe tissue injury.

Toxicological Data: Toxicological studies were not performed on the blended product, although it is considered to be a severe eye irritant, and moderately irritating to the skin.

Toxicological Data (as Potassium Hydroxide):

Oral LD50 (rat) : 273 mg/kg

Information on likely routes of exposure

Ingestion : Harmful if swallowed. Causes digestive tract burns.

Inhalation : Vapors and mist may irritate throat and respiratory system and cause coughing.

Skin contact : Causes skin burns.

Eye contact : Causes eye burns.

Symptoms related to the physical, chemical and toxicological characteristics : Burning pain and severe corrosive skin damage. Permanent eye damage including blindness could result.

Acute toxicity : Harmful if swallowed.

Skin corrosion/irritation : Causes severe skin burns and eye damage.

Serious eye damage/eye irritation : Causes severe eye burns. Causes serious eye damage.

Respiratory sensitization : No data available.

Skin sensitization : No data available.

Germ cell mutagenicity : No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity: This product does not contain any materials considered to be carcinogenous according to OSHA, NTP, IARC, or ACGIH.

Reproductive toxicity : No data available.

Specific target organ toxicity - single exposure : No data available.

Specific target organ toxicity - repeated exposure : No data available.

Toxicological Data (as Trisodium Phosphate) :

Eye Effects : Extremely irritating to unwashed eyes and moderately irritating to washed eyes (rabbit).

Skin Effects : Minimally irritating at 300 and 20 mg/kg (rabbit).

Dermal LD50 = > 300 mg/kg (rabbit)

Oral LD50 (20% aqueous solution, rat) = 6.5 g/kg

Inhalation LC50 = no data.

Target Organs : Eyes and respiratory passages.

SECTION 12 : ECOLOGICAL INFORMATION

Ecotoxicological Information: No data found for the blended product.

Ecotoxicological Information (as Potassium Hydroxide):

Aquatic Toxicity : LC50, 96 hours (Western mosquitofish, Gambusia affinis) = 80 mg/l

General : Can cause damage to vegetation. Toxicity is primarily associated with pH. Toxic to aquatic life.

Environmental Effects : Can be dangerous if allowed to enter drinking water intakes. Do not contaminate domestic or irrigation water supplies, lakes, streams, ponds, or rivers.

Persistence and Degradation : Degrades readily by reacting with natural carbon dioxide in the air. Does not bioaccumulate.

Mobility in Soil : Not available

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

Ecological Information (as Trisodium Phosphate) :

Chemical Fate Information : Inorganic compounds in contact with the soil, sub-surface or surface waters may be taken up by plants and utilized as essential nutrients. Phosphates may also form precipitates, usually with calcium or magnesium. The resultant compounds are insoluble in water and become part of the soil or sediment. The term biodegradability, as such, is not applicable to inorganic compounds.

SECTION 13 : DISPOSAL CONSIDERATIONS

Waste Disposal Method: Recycle, recovery and reuse of materials, where permitted, is encouraged as an alternate to disposal as a waste. Hazardous waste classification under federal regulations (40 CFR Part 261 et seq) is dependent upon whether a material is a RCRA listed hazardous waste or has any of the four RCRA hazardous waste characteristics. Refer to 40 CFR Part 261.33 to determine if a given material to be disposed of is a RCRA listed hazardous waste. RCRA Hazardous Waste Characteristics: There are four characteristics defined in 40 CFR Section 261.21-61.24: *Ignitability, Corrosivity, Reactivity, and Toxicity*. To determine Ignitability, see Section 9 of this SDS (flash point). For Corrosivity, see Sections 9 and 14 (pH and DOT corrosivity). For Reactivity, see Section 10 (incompatible materials). For Toxicity, see Section 2 (composition). Federal regulations are subject to change. State and local requirements, which may differ from or be more stringent than the federal regulations, may also apply to the classification of the material if it is to be disposed.

Is the unused product a RCRA hazardous waste (40CFR261.33) if discarded? No

If yes, the RCRA ID number is : N/A

SECTION 14 : TRANSPORTATION INFORMATION

Transportation Emergency Telephone Number: 3E 24 hour number : (866)302-6855*

*Please refer to c# referenced in section 1 of this sds.

UN Number / DOT Proper Shipping Name / DOT Hazard Class /Packing Group / DOT Label & other information: **UN1814, POTASSIUM HYDROXIDE, SOLUTION,**

8, PGII, (CORROSIVE, DETERGENT BLEND, ERG#154)

SECTION 15 : REGULATORY INFORMATION

US FEDERAL REGULATIONS :

TSCA (Toxic Substances Control Act) Status : TSCA (United States) The intentional ingredients of this product are listed.

CERCLA RQ - 40 CFR 302.4(a) :

Component	RQ (lbs)
Potassium Hydroxide	1000
Trisodium Phosphate Crystals	5000

SARA 302 Components - 40CFR 355 Appendix A = None.

Section 311/312 Hazard Class - 40 CFR 370.2 =

(as Potassium Hydroxide) : Immediate, Delayed

(as Trisodium Phosphate) : Immediate (Acute) Health / TPQ = 10,000 lbs.

SARA Regulations 313 and 40 CFR 372.65: This product does not contain any chemicals subject to reporting requirements.

INTERNATIONAL REGULATIONS :

Potassium Hydroxide (CAS# 1310-58-3) is listed on the following inventories : AICS (Australia), DSL (Canada), IECSC (China), EINECS (Europe), ENCS (Japan), ECL (Korea), New Zealand Inventory, PICCS (Philippines)

Trisodium Phosphate (CAS#10101-89-0) is listed on the following inventories : WHMIS Classification Class D, Div. 2, Subdiv. B (toxic).
Product ID#2811.

STATE REGULATIONS :

Potassium Hydroxide (CAS# 1310-58-3) is listed on the following inventories : Pennsylvania Right-to-Know Hazardous Substances, Massachusetts RTK Substance List, Rhode Island RTK.

California Safe Drinking Water Act (Prop. 65) Listing : None listed

SECTION 16 : OTHER INFORMATION

NFPA Rating : HEALTH: 3 FLAMMABILITY: 0 REACTIVITY: 1
NFPA hazard degree designation 704: 4 = extreme, 3 = high, 2 = moderate, 1 = slight, 0 = none.

Revision Date : 8/3/2016

Information and data compiled to compose this SDS is correct to the best of our knowledge as of the printed date, and is offered solely for your consideration, investigation, and verification.