# SAFETY DATA SHEET

Date Entered: 18/06/23 Revised: NA

## 1 PRODUCT AND COMPANY IDENTIFICATION

English

(1.) Trade Name: **SERUM ACCELERATOR**

(2.) Chemical Name: Potassium Hydroxide

(3.) Product Number: 5-730

(4) Chemical Family: alkaline reagent

(5.) Chemical Formula: Proprietary

Manufacturer: Restoration Innovations, Pty Ltd
3/22 Industry Drive,
Tweed Heads South,
NSW2486

07 5523 0554

(6.) **Emergency Contact Phone Numbers:** NSW Poisons Information Centre 13 11 26

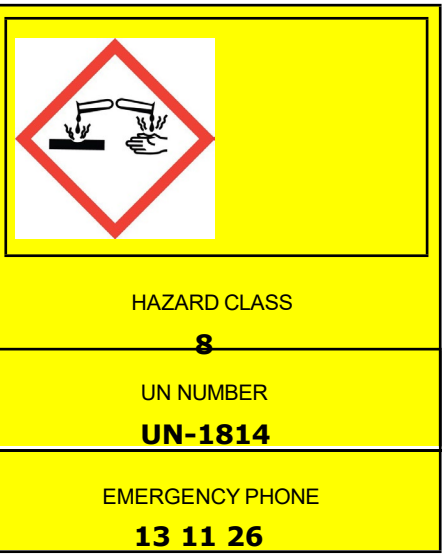
## 2 HAZARDS IDENTIFICATION

(1.) Hazardous Classification:
Corrosive Liquid, GHS Classification: Acute Toxicity Oral (Category 4), Skin Corrosion (Category 1A), Serious eye damage (Category 2A), Acute aquatic toxicity (Category 3)

(2.) Signal Word: ~~Danger~~

(3.) Hazardous Statement: H301: Toxic if swallowed. H314: Causes severe skin burns and eye damage. H315: Causes skin. H319: Causes eye irritation.

(4.) Precautionary Labeling:
Harmful or fatal if swallowed. Causes severe eye injury. Avoid contact with skin causes skin irritation and/or blistering. Do not ingest. Keep out of reach of children. Keep container tightly closed when not in use. Store container in cool dry areas. Store at temperatures below 37.7$^0$ C. Do not dispose of the unused portions in water courses, streams, rivers, estuaries and oceans. Do not reuse empty containers. Do not return unused in original packaging material.




(5.) Description Other Hazards: not applicable

(6.) Unknown Toxicity: not applicable

## 3 COMPOSITION/INFORMATION ON INGREDIENTS

Note: the list of all hazardous substances or CERCLA grreater 1% and carcinogens at 0.1% or greater.

| Hazardous Substances (1.) Ingrediente: | (2.) Nota | (3.) SARA 313 | (4.) CAS #: | (5.) % range: | (6.) PEL: | (7.) LD50: | (7.) TLV: |
|---|---|---|---|---|---|---|---|
| Potassium Hydroxide Liquid | | No | 1310-58-3 | 1-45 | n/d | 214mg/kg | n/d |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

Balance Nonhazardous

**Note:**

## 4 FIRST AID MEASURES

English

(1.) Main entry routes into the body(s): (2.) Eyes: X (3.) Skin: X (4.) Inhalation: ___ (5.) Ingestion: ___

(6.) Acute Effects:

(7.) Eyes: Immediately flush eyes with a directed stream of water for at least 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissues. Washing eyes within several seconds is essential to achieve maximum effectiveness. GET MEDICAL ATTENTION IMMEDIATELY.

(8.) Skin: Immediately flush contaminated areas with water. Remove contaminated clothing, jewelry and shoes. Wash contaminated areas with soap and water. Thoroughly clean and dry contaminated clothing before reuse.

(9.)Inhalation: If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Seek Immediate medical attention.

(10.) Ingestion: DO NOT induce vomiting. Loosen tight clothing. Give victim plenty of water to dilute stomach contents. Seek immediate medical attention.

(11.) Acute Symptoms: Risk of permanent corneal injury and possible blindness if splashed in the eyes

(12.) Note to Physician:
The absence of visible signs or symptoms of burns does NOT reliably exclude the presence of actual tissue damage. Probable mucosal damage may contraindicate the use of gastric lavage.

## 5 FIRE FIGHTING MEASURES

(1.) Flammable Properties: Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes. May react with chemically reactive metals such as aluminum, zinc, magnesium, copper, etc. to release hydrogen gas which can form explosive mixtures in air.

***Extinguishing media***

(2.) Suitable Extinguishing Media:

Use extinguishing agents appropriate for surrounding fire.

(3.) Unsuitable extinguishing media:

Do not use dry chemicals, CO2, Halon, foam or fire blanket

***Protection of Fire Fighters***

(4.) Protective Equipment:

Wear NIOSH approved positive pressure self-contained breathing apparatus operated in pressure demand mode. Avoid contact with skin.

(5.) Specific Hazards:

Move container from fire area if it can be done without risk. Cool containers with water.

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## 6 ACCIDENTAL RELEASE MEASURES

English

(1.) Personal Precautions: Avoid contact with skin.

(2.) Environmental Precautions: Wear appropriate personal protective equipment recommended in Section 8 of the SDS. Completely contain spilled material with dikes, sandbags, etc. Keep out of water supplies and sewers. Liquid material may be removed with a vacuum truck. Flush spill area with water, if appropriate. This material is alkaline and may raise the pH of surface waters with low buffering capacity. Releases should be reported, if required, to appropriate agencies.

(3.) Waste Disposal Method: The use of a low grade acid will accelerate the nuetralization process. Solution should be neutralized to pH 7.0. Follow local, state and federal regulations for disposal.

## 7 HANDLING AND STORAGE

(1.) Storage: Store and handle in accordance with all current regulations and standards. Keep container tightly closed and properly labeled. Do not store in aluminum containers or use aluminum fittings or transfer lines, as flammable hydrogen gas may be generated. Keep separated from incompatible substances (see Section 10 of SDS)

(2.) Handling: Avoid breathing vapor or mist. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. When mixing, slowly add to water to minimize heat generation and spattering.

(3.) Precautionary Labeling: Harmful or fatal if swallowed. Causes severe eye injury. Avoid contact with skin causes skin irritation and/or blistering. Do not ingest. Keep out of reach of children. Keep container tightly closed when not in use. Store container in cool dry areas. Store at temperatures below $37.7^0$ C. Do not dispose of the unused portions in water courses, streams, rivers, estuaries and oceans. Do not reuse empty containers. Do not return unused in original packaging material.

## 8 Exposure Controls/Personal Protection

(1.) ***Ventilation:*** (2.) Local Exhaust: ____ (3.) General Exhaust: X (4.) None Required: ____

(5.) ***Personal Protection Equipment:***

(6.) ***Respirator Type***: (7.) Full Face Respirator: _____ (8.) Half Face Respirator: _____ (9.) Dust Particle Filter: X

Note:

(10.) ***Gloves:*** (11.) Natural rubber: ____ (12.) Plastic: X (13.) Nitril: X (14.) Neoprene: X (15.) Butyl: ____

(16.) Other: _____

(17.) ***Eye Protection:*** (18.) Glasses With Side Shields: X (19.) Full Face Shield: _____ (20.) Chemical Splash Goggles: X

(21.) Other: None

(22.) ***Symbols Of PPE Required:***

| CHEMICAL NAME: | ACGIH | OSHA |
|---|---|---|
| Potassium Hydroxide | 2mg/m³ | 2mg/m³ |

(23.) ***Engineering Controls:***

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## 9 PHYSICAL & CHEMICAL PROPERTIES

English

(1.) Physical State: Liquid

(2.) Appearance: Clear

(3.) Odor: None

(4.) Boiling Point: 289 $^0$F 143 $^0$C

(5.) Freeze Point: -20 $^0$F -29 $^0$C

(6.) Flash Point: No inflamable $^0$F

(7.) Specific Gravity: 1.45

(8.) Density: 1.26 g/cm3.

(9.) pH Neat: 13.5

(10.) pH 1%: 13.0

(11.) % Solids: 45.0%

(12.) % Volatiles: 55.0%

(13.) Solubility In Water: Complete

(14.) Vapor Pressure: n/d

(15.) Vapor Density: n/d

(16.) Evaporation Rate: > 1 (butyl acetate = 1)

(17.) VOC Less Exempt: 0.0

(18.) VOC As Packaged: 0.0

(19.) Viscosity: 500

## 10 CHEMICAL STABILITY & REACTIVITY INFORMATION

(1.) Thermal Stability: Stable

(2.) Chemical Stability: Stable

(3.) Condition To Avoid: Mixing with water, acid or incompatible materials may cause splattering and release of large amounts of heat. Will react with some metals forming flammable hydrogen gas. Carbon monoxide gas may form upon contact with reducing sugars, food and beverage products in enclosed spaces

(4.) Hazardous Decomposition Products: None known

(5.) Hazardous Polymerization: (A) May Occur: _____ (B) Will not occur: X

(6.) Materials To Avoid: Acids, Flammable liquids, Halogenated compounds, prolonged contact with aluminum, brass, bronze, copper, lead, tin, zinc or other alkali sensitive metals or alloys.

(7.) Corrosive Action On Materials: severe on aluminum

(8.) Avoid: Aluminum

## 11 TOXICOLOGICAL INFORMATION

(1.) Routs(s) of entry into the body: (2.) Eyes: X (3.) Skin: X (4.) Inhalation: (5.) Ingestion:

(2.) Eyes: Contact with the eyes from this product could result into severe damage and possibly blindness.

(3.) Inhalation: Short term: difficulty in breathing with nausea. Long term: Asphyxiation could occur.

(4.) Skin: ***Incidental contact:*** will cause skin burning. ***Long Term Contact:*** may cause blistering and skin damage.

(5.) Ingestion: Harmful if swallowed. Large exposure could be fatal.

(6.) Toxicity Data: When in solution, this material will affect all tissues with which it comes in contact. The severity of the tissue damage is a function of its concentration, the length of tissue contact time, and local tissue conditions. After exposure there may be a time delay before irritation and other effects occur. This material is a strong irritant and is corrosive to the skin, eyes and mucous membranes. This material may cause severe burns and permanent damage to any tissue with which it comes into contact.

(7.) Summary Of Health Effects:

***SKIN:*** Immediate burning and possible blistering, Long-term damage to the epidermis or dermis could be possible. The
***EYES:*** Potassium Hydroxide can cause permanent corneal damage resulting in severe damage and possibly blindness.
This product is not classified as a carcinogen by NTP, IARC or OSHA

## 12 ECOLOGICAL INFORMATION

English

(1.) Environment:

**Aquatic Toxicity**: This material is alkaline and may raise the pH of surface waters with low buffering capacity. This material has exhibited moderate toxicity to aquatic organisms.
**Freshwater Fish Toxicity:** LC50 (Mosquito fish): 80 mg/L/96 hr (static bioassay in fresh water at 18-19C). LC50 (Fathead Minnow): 179 mg/L/96 hr (static at 22.3-24.7 C)
**Invertebrate Toxicity:** EC50 (Daphnia magna): 60 mg/L/48 hr (static bioassay at 20.3-20.7 C)
**Algae Toxicity:** ErC50 (selenastrum capricornutum): 61 mg/L/96 hr (static bioassay at 23-23.9 C)
**FATE AND TRANSPORT: BIODEGRADATION:** This material will disassociate into ionic from in the aquatic environment. Natural carbon dioxide will slowly neutralize this material.
**BIOCONCENTRATION:** This material will not bioconcentrate.
**ADDITIONAL ECOLOGICAL INFORMATION:** This material has exhibited slight toxicity to terrestrial organisms.
**ECOLOGICAL HAZARDS:** this material has exhibited moderate toxicity to aquatic organisms.

## 13 DISPOASAL CONSIDERATIONS

(1.) Waste Disposal:

Reuse or reprocess, if possible. Dispose in accordance with all applicable regulations. May be subject to disposal regulations

(2.) Legislation:

N/D

## 14 TRANSPORTATION INFORMATION

(1.) Indicate country agency/regulator that specifies requirements: U.S.A.-DOT

(2.) Proper Shipping Description:

**5 GALLON CONAINERS (18.927 LITRE) OR MORE PROPER SHIPPING DESCRIPTION**


UN-1814, POTASSIUM HYDROXIDE, SOLUTION, 8, PGIII, ERG:60, NMFC48580-03

**4 X 1 GALLON (4 X 3.785 LITRE) CONTAINERS OR LESS LIMITED QUANTITY PROPER SHIPPING DESCRIPTION**

Compounds, Cleaning, Liquid, LIMITED QUANTITY, Item Name: Serum Accelerator, Item Number: 5-730-04, Container:Case, NMFC:48580-03

(3.) Hazard Class: 8, (4.) Hazard Number: UN-1814, (5.) HazChem Code Number: N/D

(6.) Packaging Group: PG III, (7.) Emergency Response Code: ERG#60,

(8.) Labels Required: CORROSIVE

(9.) Other Requirements: Do not reuse containers. Dispose of according to your local, state and Federal regulations.
(10.) Note: **DO NOT SHIP THIS PRODUCT BY AIR. - SHIP GROUND ONLY**

**For Limited Quantity Use:**
**Item Name: Serum Accelerator, Item Number: 5-730-12, Container:Case, NMFC:48580-03**

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## 15 REGULATORY INFORMATION

English

(1.) Poison Schedule:

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 6

Australian Inventory of Industrial Chemicals (AIIC)

## 16 OTHER INFORMATION

(1.) Additional Information:

ACRONYMS :
ADB -Air Dry Basis
BEI - Biological Exposure Index ( s )
CAS # - Chemical Abstract Service number - used to uniquely identify chemical compounds
CNS - Central Nervous System
IARC - International Agency for Research on Cancer
M - moles per liter concentration unit
mg/m3 - Milligrams per cubic meter
NOS - Not specified
pH - relates to hydrogen ion concentration using a scale of 0 ( high acidic) to 14 (very alkaline)
ppm = parts per million
TWA / ES - Time Weighted Average or Exposure Standard .
IBC Code - International Bulk Chemical Code
IMDG - International Maritime Dangerous Goods Code

HEALTH EFFECTS OF EXPOSURE :
Note that the effects of exposure to this product will depend on several factors including : the frequency and duration of use ; amount used ; effectiveness of control measures ; protective equipment used and method of application . Since it is impractical to prepare a Chem Alert report which would encompass all possible scenarios , it is anticipated that users assess the risks and apply control methods where appropriate .

(2) Recommendtions:

The recommendation for protective equipment contained within this Chem Alert report is provided as a guide only . Factors such as method of application, working environment , quantity used , product concentration and the availability of engineering controls should be considered before making the final selection of personal protective equipment .

(3) Report Status:

This document has been prepared by Restoration Innovations importer of the product and serves as the manufacturer's safety data (SDS ) .

It is based on information concerning the product which has been provided by or obtained from Restoration Innovations third party sources and is believed to represent the current state of knowledge about the safety measures and appropriate management for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from Restoration Innovations .

While Restoration Innovations has taken due care to include up -to-date information in this SDS accurate and makes no warranty as to the accuracy or completeness. So it is legally possible , whey prRestoration Innovations will accept no responsibility for any loss , injury or damage ( including consequential loss ) suffered or incurred by any person as a result of their reliance on the information contained in this SDS