

# Safety Data Sheet

Issue Date: 08-Sep-2015

Revision Date: 22-Aug-2016

Version 1

## 1. IDENTIFICATION

### Product Identifier

**Product Name** ReKovery

### Other means of identification

**SDS #** VLS-178

**Product Code** FFN 1235

### Recommended use of the chemical and restrictions on use

### Details of the supplier of the safety data sheet

#### **Supplier Address**

Verdesian Life Sciences, U.S., LLC.  
1001 Winstead Drive, Suite 480  
Cary, NC 27513

### Emergency Telephone Number

**Company Phone Number** Business Phone: (800) 868-6446

Fax: (919) 535-3652

**Emergency Telephone (24 hr)** INFOTRAC 1-352-323-3500 (International)  
1-800-535-5053 (North America)

## 2. HAZARDS IDENTIFICATION

**Appearance** Clear liquid

**Physical state** Liquid

**Odor** Slight vinegar

### Classification

Acute toxicity - Oral

Category 4

### Signal Word

Warning

### Hazard statements

Harmful if swallowed



### Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling  
Do not eat, drink or smoke when using this product

### Precautionary Statements - Response

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell  
Rinse mouth

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Other hazards**

Harmful to aquatic life with long lasting effects

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Please also refer to subsequent sections of this SDS for additional information regarding the components of this product.

Chemical Name	CAS No.	Weight-%
Acetic acid	64-19-7	Proprietary
Potassium hydroxide	1310-58-3	Proprietary

\*\*If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.\*\*

### 4. FIRST AID MEASURES

**First Aid Measures**

<b>General Advice</b>	Provide this SDS to medical personnel for treatment.
<b>Eye Contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists: Get medical advice/attention.
<b>Skin Contact</b>	Take off contaminated clothing. Wash off immediately with plenty of water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
<b>Inhalation</b>	Remove exposed individual(s) to fresh air for 20 minutes. Consult a physician / poison center if individual's condition declines or if symptoms persist.
<b>Ingestion</b>	Rinse mouth. Do not induce vomiting without medical advice. Drink 1 or 2 glasses of water. Never give anything by mouth to an unconscious person. Call a poison center or doctor/physician if you feel unwell.

**Most important symptoms and effects**

<b>Symptoms</b>	Harmful if swallowed. May cause eye, skin and respiratory tract irritation.
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**Indication of any immediate medical attention and special treatment needed**

<b>Notes to Physician</b>	Treat symptomatically.
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### 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable Extinguishing Media** Not determined.

**Specific Hazards Arising from the Chemical**

Product is not flammable.

**Protective equipment and precautions for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

**Personal Precautions**                      Ventilate affected area. Wear protective clothing as described in Section 8 of this safety data sheet. Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product.

### Environmental precautions

**Environmental precautions**            See Section 12 for additional Ecological Information.

### Methods and material for containment and cleaning up

**Methods for Containment**                Prevent further leakage or spillage if safe to do so. Soak up and contain spill with an inert (i.e. vermiculite, dry sand or earth) absorbent material.

**Methods for Clean-Up**                    Sweep up absorbed material and shovel into suitable containers for disposal. Discard any product, residue, disposable container or liner in full compliance with federal, state, and local regulations. For waste disposal, see section 13 of the SDS.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

**Advice on Safe Handling**                Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling. Use personal protection recommended in Section 8. Avoid contact with skin, eyes or clothing. Do not eat or drink while handling this material.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions**                      Keep containers tightly closed in a dry, cool and well-ventilated place. Store above freezing point and below 105°F (40.5°C). Protect from sunlight.

**Incompatible Materials**                 Strong oxidizing agents. Strong alkalis.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Acetic acid 64-19-7	STEL: 15 ppm TWA: 10 ppm	TWA: 10 ppm TWA: 25 mg/m <sup>3</sup> (vacated) TWA: 10 ppm (vacated) TWA: 25 mg/m <sup>3</sup>	IDLH: 50 ppm TWA: 10 ppm TWA: 25 mg/m <sup>3</sup> STEL: 15 ppm STEL: 37 mg/m <sup>3</sup>
Potassium hydroxide 1310-58-3	Ceiling: 2 mg/m <sup>3</sup>	(vacated) Ceiling: 2 mg/m <sup>3</sup>	Ceiling: 2 mg/m <sup>3</sup>

### Appropriate engineering controls

**Engineering Controls**                    Apply technical measures to comply with the occupational exposure limits. Provide general or local exhaust ventilation systems. Maintain eye wash fountain and quick-drench facilities in work area.

**Individual protection measures, such as personal protective equipment**

<b>Eye/Face Protection</b>	Use safety goggles, safety glasses with side shields and/or a full face shield as described by OSHA's eye and face protection regulations in 29CFR 1910.133.
<b>Skin and Body Protection</b>	Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact. Impervious rubber or neoprene gloves. Refer to 29 CFR 1910.138 for appropriate skin and body protection.
<b>Respiratory Protection</b>	Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a MSHA/NIOSH-approved respirator.
<b>General Hygiene Considerations</b>	Avoid contact with skin, eyes and clothing. After handling this product, wash hands before eating, drinking, or smoking. If contact occurs, remove contaminated clothing. If needed, take first aid action shown on section 4 of this SDS. Launder contaminated clothing before reuse.

**9. PHYSICAL AND CHEMICAL PROPERTIES****Information on basic physical and chemical properties**

<b>Physical state</b>	Liquid	<b>Odor</b>	Slight vinegar
<b>Appearance</b>	Clear liquid	<b>Odor Threshold</b>	Not determined
<b>Color</b>	Clear		
<b>Property</b>	<b>Values</b>	<b>Remarks • Method</b>	
<b>pH</b>	7.6		
<b>Melting Point/Freezing Point</b>	Not determined		
<b>Boiling Point/Boiling Range</b>	100 °C / 212 °F		
<b>Flash Point</b>	Not determined		
<b>Evaporation Rate</b>	Not determined		
<b>Flammability (Solid, Gas)</b>	n/a-liquid		
<b>Flammability Limits in Air</b>			
<b>Upper Flammability Limits</b>	Not determined		
<b>Lower Flammability Limit</b>	Not determined		
<b>Vapor Pressure</b>	Not determined		
<b>Vapor Density</b>	Not determined		
<b>Relative Density</b>	1.27		
<b>Water Solubility</b>	Percent by weight: approx. 98%		
<b>Solubility in other solvents</b>	Not determined		
<b>Partition Coefficient</b>	Not determined		
<b>Auto-ignition Temperature</b>	Not determined		
<b>Decomposition Temperature</b>	Not determined		
<b>Kinematic Viscosity</b>	Not determined		
<b>Dynamic Viscosity</b>	Not determined		
<b>Explosive Properties</b>	Not determined		
<b>Oxidizing Properties</b>	Not determined		

**10. STABILITY AND REACTIVITY****Reactivity**

Not reactive under normal conditions.

**Chemical Stability**

Stable under recommended storage conditions.

**Possibility of Hazardous Reactions**

None under normal processing.

**Conditions to Avoid**

Keep out of reach of children.

**Incompatible Materials**

Strong oxidizing agents. Strong alkalis.

**Hazardous Decomposition Products**

None known based on information supplied.

## 11. TOXICOLOGICAL INFORMATION

**Information on likely routes of exposure****Product Information**

<b>Eye Contact</b>	Direct contact with eyes may cause temporary irritation.
<b>Skin Contact</b>	Prolonged contact may cause redness and irritation.
<b>Inhalation</b>	Avoid breathing vapors or mists.
<b>Ingestion</b>	Harmful if swallowed.

**Component Information**

Chemical Name	ATEmix (oral)	ATEmix (dermal)	Inhalation LC50
Acetic acid 64-19-7	= 3310 mg/kg ( Rat )	= 1060 mg/kg ( Rabbit )	= 11.4 mg/L ( Rat ) 4 h
Potassium hydroxide 1310-58-3	= 284 mg/kg ( Rat )	-	-
Urea 57-13-6	= 8471 mg/kg ( Rat )	-	-
Glycine 56-40-6	= 7930 mg/kg ( Rat )	-	-

**Information on physical, chemical and toxicological effects**

**Symptoms** Please see section 4 of this SDS for symptoms.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Carcinogenicity** Based on the information provided, this product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

**Numerical measures of toxicity**

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 1,509.00 mg/kg

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

Harmful to aquatic life with long lasting effects.

### Component Information

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Acetic acid 64-19-7		75: 96 h Lepomis macrochirus mg/L LC50 static 79: 96 h Pimephales promelas mg/L LC50 static	65: 48 h Daphnia magna mg/L EC50 Static 47: 24 h Daphnia magna mg/L EC50
Potassium hydroxide 1310-58-3		80: 96 h Gambusia affinis mg/L LC50 static	
Urea 57-13-6		16200 - 18300: 96 h Poecilia reticulata mg/L LC50	10000: 24 h Daphnia magna Straus mg/L EC50 3910: 48 h Daphnia magna mg/L EC50 Static

### Persistence/Degradability

Not determined.

### Bioaccumulation

Not determined.

### Mobility

Chemical Name	Partition Coefficient
Acetic acid 64-19-7	-0.31
Potassium hydroxide 1310-58-3	0.83
Urea 57-13-6	-1.59

### Other Adverse Effects

Not determined

## 13. DISPOSAL CONSIDERATIONS

### Waste Treatment Methods

**Disposal of Wastes** Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated Packaging** Disposal should be in accordance with applicable regional, national and local laws and regulations.

### California Hazardous Waste Status

Chemical Name	California Hazardous Waste Status
Acetic acid 64-19-7	Toxic Corrosive Ignitable
Potassium hydroxide 1310-58-3	Toxic Corrosive

## 14. TRANSPORT INFORMATION

<b>Note</b>	Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.
<b>DOT</b>	Not regulated
<b>IATA</b>	Not regulated
<b>IMDG</b>	Not regulated

## 15. REGULATORY INFORMATION

### International Inventories

Chemical Name	TSCA	DSL/NDSL	EINECS/E LINCS	ENCS	IECSC	KECL	PICCS	AICS
Acetic acid	X	X	X	Present	X	Present	X	X
Potassium hydroxide	X	X	X	Present	X	Present	X	X
Urea	X	X	X	Present	X	Present	X	X
Glycine	X	X	X	Present	X	Present	X	X

#### Legend:

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

### US Federal Regulations

#### CERCLA

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Acetic acid 64-19-7	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ
Potassium hydroxide 1310-58-3	1000 lb		RQ 1000 lb final RQ RQ 454 kg final RQ

#### SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

#### CWA (Clean Water Act)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Acetic acid	5000 lb			X
Potassium hydroxide	1000 lb			X

### US State Regulations

#### California Proposition 65

This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Acetic acid 64-19-7	X	X	X
Potassium hydroxide 1310-58-3	X	X	X

**16. OTHER INFORMATION****NFPA****Health Hazards****Flammability****Instability****Special Hazards**

1

0

0

Not determined

**HMIS****Health Hazards****Flammability****Physical hazards****Personal Protection**

1

0

0

Not determined

**Issue Date:** 08-Sep-2015**Revision Date:** 22-Aug-2016**Revision Note:** New product**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**