

Reviewed on 02/01/2017

1 Identification

- · Product identifier
- · Trade name: Liquid Renu-It®
- · Article number: Liquid RENU-IT®
- · Details of the supplier of the safety data sheet

• Manufacturer/Supplier: Chemical Consultants Inc. 1850 Wild Turkey Circle Corona, CA 92880 USA +1 (951) 735-5511 ncollins@ccidom.com

· Information department: Product safety department

· Emergency telephone number: INFOTRAC 1-800-535-5053

2 Hazard(s) identification

· Classification of the substance or mixture

GHS05 Corrosion

Skin Corr. 1A H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.



Acute Tox. 4 H302 Harmful if swallowed.

Flam. Liq. 4 H227 Combustible liquid.

· Label elements

• *GHS label elements* The product is classified and labeled according to the Globally Harmonized System (GHS). • *Hazard pictograms*

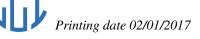


· Signal word Danger

Hazard-determining components of labeling: N-cyclohexyl-2-pyrrolidone 2-butoxyethanol potassium hydroxide Alcohols, C9-11, ethoxylated
Hazard statements H227 Combustible liquid. H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage.
Precautionary statements P210 Keep away from flames and hot surfaces. – No smoking. P260 Do not breathe dusts or mists.

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	(Contd. of page 1)
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P303+P361+P35	3 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P305+P351+P33	8 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P321	Specific treatment (see on this label).
P301+P312	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P363	Wash contaminated clothing before reuse.
P337+P313	If eye irritation persists: Get medical advice/attention.
P301+P330+P33	1 If swallowed: Rinse mouth. Do NOT induce vomiting.
P370+P378	In case of fire: Use for extinction: CO2, powder or water spray.
P405	Store locked up.
P403+P235	Store in a well-ventilated place. Keep cool.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.
· Classification syst	tem:
· NFPA ratings (sc	ale 0 - 4)



· HMIS-ratings (scale 0 - 4)



- \cdot Other hazards
- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- vPvB: Not applicable.

3 Composition/information on ingredients

· Chemical characterization: Mixtures

· Description: Mixture of the substances listed below with nonhazardous additions.

· Dang	· Dangerous components:		
6837	4-7 N-cyclohexyl-2-pyrrolidone 5-	5-15%	
1310	8-3 potassium hydroxide <	<10%	
111	6-2 2-butoxyethanol <	<10%	
68439	6-3 Alcohols, C9-11, ethoxylated <	<5%	

4 First-aid measures

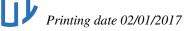
· Description of first aid measures

• General information:

Immediately remove any clothing soiled by the product.

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- Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- After inhalation: In case of unconsciousness place patient stably in side position for transportation.
- After skin contact: Immediately wash with water and soap and rinse thoroughly.
- After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
- · After swallowing: Immediately call a doctor. Drink copious amounts of water and provide fresh air. Immediately call a doctor.
- · Information for doctor:
- Most important symptoms and effects, both acute and delayed No further relevant information available.
- · Indication of any immediate medical attention and special treatment needed
- No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- · Suitable extinguishing agents:
- CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- · Special hazards arising from the substance or mixture
- During heating or in case of fire poisonous gases are produced.
- · Advice for firefighters
- · Protective equipment: Mouth respiratory protective device.

6 Accidental release measures

Mount resp Wear prote Environme Dilute with For large s Methods a Absorb wit Use neutra Dispose co Ensure ade	recautions, protective equipment and emergency procedures piratory protective device. active equipment. Keep unprotected persons away. pental precautions: plenty of water. pills: Do not allow to enter sewers/ surface or ground water. and material for containment and cleaning up: h liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). lizing agent. ntaminated material as waste according to item 13. equate ventilation. to other sections		
	a 8 for information on personal protection equipment.		
	a 13 for disposal information.		
· Protective	Action Criteria for Chemicals		
· PAC-1:			
1310-58-3	potassium hydroxide	0.1	8 mg/m3
111-76-2	2-butoxyethanol	60	ррт
· PAC-2:			
1310-58-3	potassium hydroxide		2 mg/m3
111-76-2	2-butoxyethanol		120 ppm
· PAC-3:			
1310-58-3	potassium hydroxide	5	4 mg/m3
		Conto	l. on page 4)
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111-76-2 2-butoxyethanol

(Contd. of page 3) 700 ppm

7 Handling and storage

· Handling:

- *Precautions for safe handling* Ensure good ventilation/exhaustion at the workplace. Prevent formation of aerosols.
- Information about protection against explosions and fires: Keep ignition sources away - Do not smoke. Keep respiratory protective device available.
- · Conditions for safe storage, including any incompatibilities
- · Storage:
- Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: Keep receptacle tightly sealed.
- Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical systems: No further data; see item 7.
- · Control parameters
- · Components with limit values that require monitoring at the workplace:
- The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.

At this time, the other constituents have no known exposure limits.

1310-58-3 potassium hydroxide

REL Ceiling limit value: 2 mg/m³

TLV Ceiling limit value: 2 mg/m³

111-76-2 2-butoxyethanol

- PEL Long-term value: 240 mg/m³, 50 ppm Skin
- REL Long-term value: 24 mg/m³, 5 ppm Skin
- TLV Long-term value: 97 mg/m³, 20 ppm BEI

· Ingredients with biological limit values:

111-76-2 2-butoxyethanol

BEI 200 mg/g creatinine Medium: urine Time: end of shift Parameter: Butoxyacetic acid with hydrolysis

• Additional information: The lists that were valid during the creation were used as basis.

· Exposure controls

- · Personal protective equipment:
- General protective and hygienic measures:
- Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

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	(Contd. of page 4)
Wash hands before breaks and at th	
Avoid contact with the eyes.	
Avoid contact with the eyes and skin • Breathing equipment:	l.
	lution use respiratory filter device. In case of intensive or longer exposure use
respiratory protective device that is	
· Protection of hands:	
- Mu	
Mi Protective gloves	
The glove material has to be impern	neable and resistant to the product/ the substance/ the preparation.
	ation to the glove material can be given for the product/ the preparation/ the
chemical mixture.	
	onsideration of the penetration times, rates of diffusion and the degradation
• Material of gloves The selection of the suitable gloves	does not only depend on the material, but also on further marks of quality and
	acturer. As the product is a preparation of several substances, the resistance of
the glove material can not be calcul	ated in advance and has therefore to be checked prior to the application.
• Penetration time of glove material	
The exact break through time has observed.	to be found out by the manufacturer of the protective gloves and has to be
• Eye protection:	
Tightly sealed goggles	
Tightly sealed goggles	
Tightly sealed goggles	rties
9 Physical and chemical proper • Information on basic physical and • General Information	
9 Physical and chemical proper • Information on basic physical and • General Information • Appearance:	chemical properties
9 Physical and chemical proper • Information on basic physical and • General Information • Appearance: Form:	chemical properties Fluid
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9 Physical and chemical proper • Information on basic physical and • General Information • Appearance: Form: Color:	chemical properties Fluid According to product specification
9 Physical and chemical proper • Information on basic physical and • General Information • Appearance: Form: Color: • Odor:	chemical properties Fluid According to product specification Characteristic
9 Physical and chemical proper • Information on basic physical and • General Information • Appearance: Form: Color: • Odor: • Odor threshold:	chemical properties Fluid According to product specification Characteristic Not determined.
 9 Physical and chemical proper • Information on basic physical and • General Information • Appearance: Form: Color: • Odor: • Odor: • Odor threshold: • pH-value at 20 °C (68 °F): • Change in condition Melting point/Melting range: 	chemical properties Fluid According to product specification Characteristic Not determined. 14 Undetermined.
9 Physical and chemical proper • Information on basic physical and • General Information • Appearance: Form: Color: • Odor: • Odor: • Odor threshold: • pH-value at 20 °C (68 °F): • Change in condition	chemical properties Fluid According to product specification Characteristic Not determined. 14
 9 Physical and chemical proper • Information on basic physical and • General Information • Appearance: Form: Color: • Odor: • Odor: • Odor threshold: • pH-value at 20 °C (68 °F): • Change in condition Melting point/Melting range: 	chemical properties Fluid According to product specification Characteristic Not determined. 14 Undetermined.
 9 Physical and chemical proper • Information on basic physical and • General Information • Appearance: Form: Color: • Odor: • Odor: • Odor threshold: • pH-value at 20 °C (68 °F): • Change in condition Melting point/Melting range: Boiling point/Boiling range: 	chemical properties Fluid According to product specification Characteristic Not determined. 14 Undetermined. 248 °C (478 °F)
 9 Physical and chemical proper • Information on basic physical and • General Information • Appearance: Form: Color: • Odor: • Odor threshold: • pH-value at 20 °C (68 °F): • Change in condition Melting point/Melting range: Boiling point/Boiling range: 	chemical properties Fluid According to product specification Characteristic Not determined. 14 Undetermined. 248 °C (478 °F) 85 °C (185 °F)
 9 Physical and chemical proper • Information on basic physical and • General Information • Appearance: Form: Color: • Odor: • Odor: • Odor: • Odor threshold: • pH-value at 20 °C (68 °F): • Change in condition Melting point/Melting range: Boiling point/Boiling range: • Flash point: • Flammability (solid, gaseous): 	chemical properties Fluid According to product specification Characteristic Not determined. 14 Undetermined. 248 °C (478 °F) 85 °C (185 °F) Not applicable.
 9 Physical and chemical proper • Information on basic physical and • General Information • Appearance: Form: Color: • Odor: • Odor threshold: • pH-value at 20 °C (68 °F): • Change in condition Melting point/Melting range: Boiling point/Boiling range: • Flash point: • Flammability (solid, gaseous): • Ignition temperature: 	chemical properties Fluid According to product specification Characteristic Not determined. 14 Undetermined. 248 °C (478 °F) 85 °C (185 °F) Not applicable. 240 °C (464 °F)
 9 Physical and chemical proper • Information on basic physical and • General Information • Appearance: Form: Color: Odor: Odor threshold: • pH-value at 20 °C (68 °F): • Change in condition Melting point/Melting range: Boiling point/Boiling range: • Flash point: • Flammability (solid, gaseous): • Ignition temperature: • Decomposition temperature: 	chemical properties Fluid According to product specification Characteristic Not determined. 14 Undetermined. 248 °C (478 °F) 85 °C (185 °F) Not applicable. 240 °C (464 °F) Not determined.



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		(Contd. of page
Explosion limits:		
Lower:	Not determined.	
Upper:	Not determined.	
Vapor pressure at 20 °C (68 °F):	23 hPa (17 mm Hg)	
Density at 20 °C (68 °F):	1.095 g/cm ³ (9.138 lbs/gal)	
Relative density	Not determined.	
Vapor density	Not determined.	
Evaporation rate	Not determined.	
Solubility in / Miscibility with		
Water:	Fully miscible.	
Partition coefficient (n-octanol/wate	r): Not determined.	
Viscosity:		
Dynamic:	Not determined.	
Kinematic:	Not determined.	
Solvent content:		
VOC content:	206.0 g/l / 1.72 lb/gl	
Other information	No further relevant information available.	

10 Stability and reactivity

• *Reactivity* No further relevant information available.

· Chemical stability

- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- · Information on toxicological effects
- Acute toxicity:
- · LD/LC50 values that are relevant for classification:
- 1310-58-3 potassium hydroxide

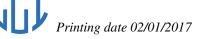
Oral LD50 273 mg/kg (rat)

- · Primary irritant effect:
- on the skin: Strong caustic effect on skin and mucous membranes.
- on the eye:
- Strong caustic effect.
- Strong irritant with the danger of severe eye injury.
- · Sensitization: No sensitizing effects known.
- · Additional toxicological information:
- The product shows the following dangers according to internally approved calculation methods for preparations: Harmful
- *Corrosive*
- Irritant

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(Contd. of page 6) Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer)

111-76-2 2-butoxyethanol

·NTP (National Toxicology Program)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

- · Toxicity
- Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- $\cdot \textit{Bioaccumulative potential No further relevant information available}.$
- · Mobility in soil No further relevant information available.
- · Additional ecological information:
- · General notes:

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. Must not reach bodies of water or drainage ditch undiluted or unneutralized.

Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably reduced, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- **vPvB:** Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- · Recommendation:

Dispose of content and/or container in accordance with local, regional, national and/or international regulations.

- · Uncleaned packagings:
- · Recommendation:

Dispose of content and/or container in accordance with local, regional, national and/or international regulations • **Recommended cleansing agent:** Water, if necessary with cleansing agents.

· UN-Number	
· DOT, IMDG, IATA	UN1760
· UN proper shipping name	
DOT	Corrosive liquids, n.o.s. (Potassium hydroxide)
· IMDG, IATA	CORROSIVE LIQUID, N.O.S. (POTASSIUM HYDROXIDE)

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Transport hazard class(es)	
DOT	
~	
ut st	
CORROSIVE	
8	
Class	8 Corrosive substances
Label	8
IMDG, IATA	
Pa	
8	
Class	8 Corrosive substances
Label	8 Corrosive substances
	0
Packing group	
DOT, IMDG, IATA	II
Environmental hazards:	
Marine pollutant:	No
Special precautions for user	Warning: Corrosive substances
Danger code (Kemler):	80
EMS Number:	F-A, S-B
Segregation groups	Alkalis
Stowage Category	В
Stowage Code	SW2 Clear of living quarters.
Transport in bulk according to Annex	II of
MARPOL73/78 and the IBC Code	Not applicable.
	11
Transport/Additional information:	
DOT	
Quantity limitations	On passenger aircraft/rail: 1 L
	On cargo aircraft only: 30 L
IMDG	
Limited quantities (LQ)	1L
Excepted quantities (\widetilde{EQ})	Code: E2
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
UN "Model Regulation":	UN 1760 CORROSIVE LIQUIDS, N.O.S. (POTASSIU
On model Regulation .	HYDROXIDE), 8, II

15 Regulatory information

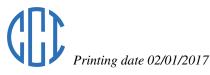
 \cdot Safety, health and environmental regulations/legislation specific for the substance or mixture \cdot Sara

• Section 355 (extremely hazardous substances):

None of the ingredients is listed.

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· Section 313 (Specific toxic chemical listings):

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111-76-2 2-butoxyethanol
· TSCA (Toxic Substances Control Act):
All ingredients are listed.
· Proposition 65
· Chemicals known to cause cancer:
None of the ingredients is listed.
· Chemicals known to cause reproductive toxicity for females:
None of the ingredients is listed.
· Chemicals known to cause reproductive toxicity for males:
None of the ingredients is listed.
· Chemicals known to cause developmental toxicity:
None of the ingredients is listed.
· Carcinogenic categories
· EPA (Environmental Protection Agency)

111-76-2 2-butoxyethanol

· TLV (Threshold Limit Value established by ACGIH)

111-76-2 2-butoxyethanol

· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

• *GHS label elements* The product is classified and labeled according to the Globally Harmonized System (GHS). • *Hazard pictograms* 



· Signal word Danger

•	
· Hazard-determinin	g components of labeling:
N-cyclohexyl-2-pyr	rolidone
2-butoxyethanol	
potassium hydroxid	le
Alcohols, C9-11, et	hoxylated
· Hazard statements	
H227 Combustible	liquid.
H302 Harmful if sw	vallowed.
H314 Causes sever	e skin burns and eye damage.
· Precautionary state	ements
P210	Keep away from flames and hot surfaces. – No smoking.
P260	Do not breathe dusts or mists.
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P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P303+P361+P353	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
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		(Contd. of page 9)
P321	Specific treatment (see on this label).	
P301+P312	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.	
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P370+P378	In case of fire: Use for extinction: CO2, powder or water spray.	
P405	Store locked up.	
P403+P235	Store in a well-ventilated place. Keep cool.	
P501	Dispose of contents/container in accordance with local/regional/nationa regulations.	l/international

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

## **16 Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship. California AQMD rule 1171 compliant when used as a dehazer for the removal of cured inks / stains.

- · Department issuing SDS: Environment protection department.
- · Contact: Mr. Collins
- · Date of preparation / last revision 02/01/2017 / -

· Abbreviations and acronyms: ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association ACGIH: American Conference of Governmental Industrial Hygienists EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA) VOC: Volatile Organic Compounds (USA, EU) LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety & Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit REL: Recommended Exposure Limit BEI: Biological Exposure Limit Flam. Liq. 4: Flammable liquids - Category 4 Acute Tox. 4: Acute toxicity - Category 4 Skin Corr. 1A: Skin corrosion/irritation - Category 1A Eye Dam. 1: Serious eye damage/eye irritation - Category 1