according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

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1 Identification Product identifier Trade name: Reversion Neutralizer · Product code: RE2400SS Recommended use and restriction on use · Recommended use: Laboratory chemicals Restrictions on use: No relevant information available. • Details of the supplier of the Safety Data Sheet · Manufacturer/Supplier: AquaPhoenix Scientific, Inc. 860 Gitts Run Road Hanover, PA 17331 USA Tel +1 (717)632-1291 Toll-Free: (866)632-1291 info@aquaphoenixsci.com Distributor: AquaPhoenix Scientific 860 Gitts Run Road, Hanover, PA 17331 (717) 632-1291 · Emergency telephone number: ChemTel Inc. (800)255-3924 (North America) +1 (813)248-0585 (International) 2 Hazard(s) identification · Classification of the substance or mixture Met. Corr.1 H290 May be corrosive to metals. Skin Corr. 1A H314 Causes severe skin burns and eye damage. Eye Dam. 1 H318 Causes serious eye damage. [•] Label elements · GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS). · Hazard pictograms: GHS05 · Signal word: Danger · Hazard statements: H290 May be corrosive to metals. H314 Causes severe skin burns and eye damage. · Precautionary statements: Keep only in original container. P234

- P260 Do not breathe mist/vapors/spray.
- P264 Wash thoroughly after handling.

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88%

12%

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P280	Wear protective gloves/protective clothing/eye protection.
P301+P330+P33	31 If swallowed: Rinse mouth. Do NOT induce vomiting.
P303+P361+P35	53 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P33	88 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if
	present and easy to do. Continue rinsing.
P310	Immediately call a poison center/doctor.
P363	Wash contaminated clothing before reuse.
P390	Absorb spillage to prevent material damage.
P405	Store locked up.
P406	Store in corrosive resistant container with a resistant inner liner.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards There are no other hazards not otherwise classified that have been identified.

3 Composition/information on ingredients

· Chemical characterization: Mixtures

· Components:

7732-18-5 Water

1310-73-2 Sodium hydroxide

Met. Corr.1, H290; Skin Corr. 1A, H314; Eye Dam. 1, H318

Additional information:

For the listed ingredient(s), the identity and/or exact percentage(s) are being withheld as a trade secret. For the wording of the listed Hazard Statements, refer to section 16.

4 First-aid measures

[•] Description of first aid measures

• General information: Immediately remove any clothing soiled by the product.

• After inhalation: Supply fresh air and to be sure to call for a doctor.

• After skin contact:

Immediately rinse with water.

If skin irritation continues, consult a doctor.

Seek immediate help for blistering or open wounds.

• After eye contact:

Protect unharmed eye.

Remove contact lenses if worn.

Rinse opened eye for several minutes under running water. Then consult a doctor.

· After swallowing:

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; immediately call for medical help.

Most important symptoms and effects, both acute and delayed:

Eye damage.

Strong caustic effect on skin and mucous membranes.

Gastric or intestinal disorders when ingested.

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· Danger:

Danger of gastric perforation.

Causes serious eye damage.

Indication of any immediate medical attention and special treatment needed:

Medical supervision for at least 48 hours.

If medical advice is needed, have product container or label at hand.

5 Fire-fighting measures

• Extinguishing media

• Suitable extinguishing agents: Use fire fighting measures that suit the environment.

- For safety reasons unsuitable extinguishing agents: No relevant information available.
- · Special hazards arising from the substance or mixture

Formation of toxic gases is possible during heating or in case of fire.

[•] Advice for firefighters

• Protective equipment:

Wear self-contained respiratory protective device.

Wear fully protective suit.

6 Accidental release measures

[•] Personal precautions, protective equipment and emergency procedures

For large spills, use respiratory protective device against the effects of fumes/dust/aerosol. Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation.

Environmental precautions

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Methods and material for containment and cleaning up

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Place in properly marked container for disposal.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

[·] Handling

· Precautions for safe handling:

Prevent formation of aerosols.

Avoid splashes or spray in enclosed areas.

Use only in well ventilated areas.

· Information about protection against explosions and fires: No special measures required.

[•] Conditions for safe storage, including any incompatibilities

• Requirements to be met by storerooms and receptacles:

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Unsuitable material for receptacle: steel. Unsuitable material for receptacle: aluminium. Unsuitable material for receptacle: glass or ceramic. Store only in the original receptacle. **Information about storage in one common storage facility:** Store away from foodstuffs. Store away from metals.

Do not store together with oxidizing and acidic materials.

• Further information about storage conditions:

Keep containers tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

Specific end use(s) No relevant information available.

8 Exposure controls/personal protection

[·] Control parameters

Components with limit values that require monitoring at the workplace:

The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.

1310-73-2 Sodium hydroxide

	, , , , , , , , , , , , , , , , , , ,		
	Long-term value: 2 mg/m ³		
	Ceiling limit value: 2 mg/m³		
TLV (USA)	Ceiling limit value: 2 mg/m³		
EL (Canada)	Ceiling limit value: 2 mg/m ³		
EV (Canada)	Ceiling limit value: 2 mg/m³		
LMPE (Mexico)	Ceiling limit value: 2 mg/m³		

• Exposure controls

General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

• Engineering controls: Provide adequate ventilation.

- Breathing equipment: For large spills, respiratory protection may be advisable.
- Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. **Material of gloves**

Nitrile rubber, NBR

Neoprene gloves

Laminated film gloves.

• Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to

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be observed.

· Eye protection:

Contact lenses should not be worn.



Safety glasses

Follow relevant national guidelines concerning the use of protective eyewear. · Body protection: Protective work clothing

Limitation and supervision of exposure into the environment

No relevant information available.

9 Physical and chemical properties			
 Information on basic physical and Appearance: 	nformation on basic physical and chemical properties		
Form:	Liquid		
Color:	Clear		
· Odor:	Not determined.		
· Odor threshold:	Not determined.		
· pH-value:	Not determined.		
 Melting point/Melting range: 	Not determined.		
 Boiling point/Boiling range: 	110-120 °C (230-184 °F)		
· Flash point:	The product is not flammable.		
 Flammability (solid, gaseous): 	Not applicable.		
· Auto-ignition temperature:	Not determined.		
 Decomposition temperature: 	Not determined.		
· Danger of explosion:	Product does not present an explosion hazard.		
· Explosion limits			
Lower:	Not determined.		
Upper:	Not determined.		
 Oxidizing properties: 	Not determined.		
· Vapor pressure:	Not determined.		
· Density at 20 °C (68 °F):	>1.28 g/cm³ (>10.68 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/water):	Not determined.		
· Viscosity	· Viscosity		
Dynamic:	Not determined.		
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Kinematic: Other information Not determined. No relevant information available.

10 Stability and reactivity

• Reactivity: No relevant information available.

- Chemical stability: Stable under normal temperatures and pressures.
- Thermal decomposition / conditions to be avoided:
- No decomposition if used and stored according to specifications.
- [•] Possibility of hazardous reactions

Corrosive action on metals.

Strong exothermic reaction with acids.

Attacks materials containing glass and silicate.

Toxic fumes may be released if heated above the decomposition point.

· Conditions to avoid Excessive heat.

- [·] Incompatible materials
- Metals.

Strong acids

[•] Hazardous decomposition products

Under fire conditions only:

Toxic metal oxide smoke

11 Toxicological information

- [·] Information on toxicological effects
- Acute toxicity:
- · LD/LC50 values that are relevant for classification: None.
- Primary irritant effect:
- · On the skin: Strong caustic effect on skin and mucous membranes.
- On the eye: Strong caustic effect.
- Sensitization: Based on available data, the classification criteria are not met.

· IARC (International Agency for Research on Cancer):

None of the ingredients are listed.

• NTP (National Toxicology Program):

None of the ingredients are listed.

· OSHA-Ca (Occupational Safety & Health Administration):

None of the ingredients are listed.

Probable route(s) of exposure:

Ingestion.

Inhalation.

Eye contact.

Skin contact.

• Acute effects (acute toxicity, irritation and corrosivity): Causes severe skin burns and eye damage.

- · Repeated dose toxicity: No relevant information available.
- · Germ cell mutagenicity: Based on available data, the classification criteria are not met.

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- Carcinogenicity: Based on available data, the classification criteria are not met.
- **Reproductive toxicity:** Based on available data, the classification criteria are not met.
- **STOT-single exposure:** Based on available data, the classification criteria are not met.
- STOT-repeated exposure: Based on available data, the classification criteria are not met.
- · Aspiration hazard: Based on available data, the classification criteria are not met.

12 Ecological information

[·] Toxicity

- · Aquatic toxicity No relevant information available.
- · Persistence and degradability No relevant information available.
- · Bioaccumulative potential: No relevant information available.
- Mobility in soil: No 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.

Other adverse effects No relevant information available.

13 Disposal considerations

· Waste treatment methods

· Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system. The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.

[·] Uncleaned packagings

- Recommendation: Disposal must be made according to official regulations.
- Recommended cleansing agent: Water, if necessary with cleansing agents.

[·] UN-Number		
· DOT, ADR/RID/ADN, IMDG, IATA	UN1824	
UN proper shipping name		
DOT	Sodium hydroxide solution	
· ADR/RID/ADN, IMDG, IATA	SODIUM HYDROXIDE SOLUTION	
· Transport hazard class(es)		

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· DOT	
Class	8
·Label	8
· ADR/RID/ADN	
Class	8 (C5)
[.] Label	8
· IMDG, IATA	
Class	8
Label	8
 Packing group DOT, ADR/RID/ADN, IMDG, IATA 	II
· Environmental hazards	Not applicable.
• Special precautions for user	Warning: Corrosive substances
Hazard identification number (Kemler code):	80
 EMS Number: Segregation groups 	F-A,S-B Alkalis
 Transport in bulk according to Annex II o MARPOL73/78 and the IBC Code 	Not applicable.
5 Regulatory information	

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7732-18-5 Water

Proposition 65 (California)

· Chemicals known to cause cancer:

None of the ingredients are listed.

· Chemicals known to cause developmental toxicity for females:

None of the ingredients are listed.

· Chemicals known to cause developmental toxicity for males:

None of the ingredients are listed.

• Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

· EPA (Environmental Protection Agency):

None of the ingredients are listed.

· IARC (International Agency for Research on Cancer):

None of the ingredients are listed.

Canadian Domestic Substances List (DSL):

None of the ingredients are listed.

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.

· Abbreviations and acronyms:

ADR: 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 CAS: Chemical Abstracts Service (division of the American Chemical Society) LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent OSHA: Occupational Safety & Health Administration Met. Corr.1: Corrosive to metals - Category 1 Skin Corr. 1A: Skin corrosion/irritation - Category 1A Eye Dam. 1: Serious eye damage/eye irritation - Category 1 Sources Website, European Chemicals Agency (echa.europa.eu) Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor internet/registry/substreg/home/ overview/home.do) Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org) Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6 Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5. Safety Data Sheets, Individual Manufacturers SDS Prepared by: ChemTel 1305 North Florida Avenue Tampa, Florida USA 33602-2902

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Website: www.chemtel.com