



Rustoscale #162

1 PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: Rustoscale #162
Common Name: Potassium Hydroxide
SDS Number: 0133
Revision Date: 5/26/2016
Product Use: Water Treatment Compound
Supplier Details: Alliance Group, Inc. 800-648-7339
N114 W18621 Clinton Drive
Germantown, WI 53022

Contact: CHEMTEL
Phone: 1-800-255-3924

2 HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

GHS Classification in Accordance with 29 CFR 1910 (OSHA HCS):

Health, Skin corrosion/irritation, 1
Health, Serious Eye Damage/Eye Irritation, 1
Health, Respiratory or skin sensitization, 1 Respiratory
Physical, Corrosive to Metals, 1
Health, Acute toxicity, 4 Oral

GHS Label Elements, Including Precautionary Statements

GHS Signal Word: **DANGER**

GHS Hazard Pictograms:



GHS Hazard Statements:

H314 - Causes severe skin burns and eye damage
H318 - Causes serious eye damage
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
H290 - May be corrosive to metals
H302 - Harmful if swallowed

GHS Precautionary Statements:

P234 - Keep only in original container.
P261 - Avoid breathing 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/protective clothing/eye protection/face protection.
P301+330+331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+361+353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+351+338 - IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P310 - Immediately call a POISON CENTER or doctor/physician.
P361 - Remove/Take off immediately all contaminated clothing.
P405 - Store in a secure manner
P501 - Dispose of contents/container to an approved waste disposal plant.

Hazards not Otherwise Classified (HNOC) or not Covered by GHS

Route of Entry:	Eyes; Inhalation; Ingestion; Skin.
Target Organs:	Respiratory system; Eyes; Skin.
Inhalation:	Can cause severe irritation and inflammation of the respiratory tract.
Skin Contact:	May cause irritation, tearing and redness.
Eye Contact:	May cause irritation. May cause permanent eye damage.

3 COMPOSITION/INFORMATION OF INGREDIENTS

Ingredients:

Substance/Mixture: Mixture

Cas#	%	Chemical Name
7757-83-7	<15%	Sodium sulfite
110-91-8	<6%	Morpholine
1310-58-3	<6%	Potassium hydroxide

4 FIRST AID MEASURES

Inhalation:	If symptoms develop, move victim to fresh air. Give oxygen or artificial respiration if needed. GET IMMEDIATE MEDICAL ATTENTION.
Skin Contact:	Promptly flush skin with water for 15 minutes. Remove contaminated clothing immediately. Get immediate medical attention. Do not reuse clothing and shoes until cleaned. Discard leather articles such as shoes and belt. Do not apply oils and ointments unless ordered by a physician.
Eye Contact:	Immediately flush eyes with large amounts of water for at least 15 minutes, lifting eyelids occasionally to facilitate irrigation. Get immediate medical attention.
Ingestion:	If swallowed: If fully conscious, drink a quart of water. Do NOT induce vomiting. Seek immediate medical attention. If unconscious, take to a hospital or physician. Never induce vomiting or give anything by mouth to an unconscious victim. For spontaneous vomiting, keep head below hips.

5 FIRE FIGHTING MEASURES

Flammability:	No data available.
Flash Point:	No data available.
Flash Point Method:	No data available.
Burning Rate:	No data available.
Autoignition Temp:	No data available.
LEL:	No data available.
UEL:	No data available.

Fire Fighting Methods

Evacuate area of unprotected personal. Wear protective clothing including NIOSH Approved self-contained breathing apparatus. Remain upwind of fire to avoid hazardous vapors and decomposition products. Use water spray to cool fire exposed containers and disperse vapors.

Extinguishing Media

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

Unsuitable fire extinguisher: No data available.

Unusual Fire or Explosion Hazards: Product may react with some metals to release flammable hydrogen gas. Toxic vapors may be given off at high temperatures.

6 ACCIDENTAL RELEASE MEASURES

Personal Precautions

Evacuate area. Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.

Environmental Precautions

Prevent further leakage or spillage if safe to do so. Do not let products enter drains. Discharge into the environment must be avoided.

Spill

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal. Neutralize residue with dilute hydrochloric acid and dispose of properly.

7

HANDLING AND STORAGE

Handling Precautions:

Avoid contact with eyes, skin, or clothing. Avoid breathing vapors or mist. Wash thoroughly after handling. Do not puncture or drop containers. Do not expose containers to open flame, excessive heat, or direct sunlight. Add product to water slowly while stirring. If product is added rapidly or without stirring and becomes concentrated at the bottom of the mixing vessel.

Storage Requirements:

Store in cool/dry area. Keep away from sunlight, heat, sparks, and flames. Keep away from incompatible materials. Keep container tightly closed. Do not store in unlabeled or mislabeled containers. Do not freeze. Highly corrosive to most metals with evolution of hydrogen gas. Explosive/flammable concentration of hydrogen gas may accumulate inside metals containers. Elevated temperatures will increase the corrosion rate of most metals.

8

EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:

Provide local exhaust ventilation. Maintain adequate ventilation. Do not use in closed or confined spaces

Personal Protective Equipment:

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Respiratory

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator.

Eyes and Face

Wear chemical safety goggles while handling this product. Wear additional eye protection such as a face shield when the possibility exists for eye contact with splashing or spraying liquid or airborne material.

Skin

Prevent contact with this product. Wear gloves and protective clothing depending on conditions of use.

Protective gloves: gauntlet-type, neoprene, nitrile.

Component	OSHA PEL	ACGIH TWA/ TLV
Potassium Hydroxide	No data available.	2 mg/m ³
Sodium Sulfite	No data available.	No data available.
Morpholine	20ppm -TWA	20ppm

9

PHYSICAL AND CHEMICAL PROPERTIES

Appearance:

Clear to opaque colorless liquid

Physical State:

Liquid

Odor Threshold:

No data available.

Particle Size:

No data available.

Spec Grav./Density:

1.17

Viscosity:

No data available.

Sat. Vap. Conc.:

No data available.

Boiling Point:

No data available

Flammability:

No data available.

Partition Coefficient:

No data available.

Vapor Pressure:

No data available

pH:

>13.0

Evap. Rate:

No data available.

Molecular weight:

No data available.

Odor:

Odorless

Molecular Formula:

No data available.

Solubility:

Complete

Softening Point:

No data available.

Percent Volatile:

None

Heat Value:

No data available.

Freezing/Melting Pt.:

No data available.

Flash Point:

No data available.

Octanol:

No data available.

Vapor Density:

No data available.

VOC:

5.9%

Bulk Density:

No data available.

Auto-Ignition Temp:

No data available.

Decomp Temp: No data available.

UFL/LFL:

No data available.

Lower Explosion Limits: No data available.

Upper Explosion Limits: No data available.

10

STABILITY AND REACTIVITY

Reactivity:	No data available.
Chemical Stability:	Product is stable under normal conditions.
Conditions to Avoid:	Avoid moisture. Avoid contact with heat, sparks, electric arcs, other hot surfaces, and open flames. Contact with organic material may cause fire and explosions. Contact with water may cause violent reaction with evolution of heat. To dilute: Add products slowly to lukewarm water, not water to product.
Materials to Avoid:	Nitrites. Acids. Nitrates. Strong oxidizing agents. Mineral acids. Acrylonitrile. Organic peroxides. Metals such as aluminum, zinc, tin, etc.
Hazardous Decomposition:	Sulfur dioxide, sulfur oxides, sodium sulfide residue. Toxic vapors. Potassium dioxide. May react with certain metals to produce hydrogen gas
Hazardous Polymerization:	Will not occur under normal conditions.

11

TOXICOLOGICAL INFORMATION

Toxicity Data:

Eye Effects: Corrosive- Causes severe eye irritation and burns. May cause: blurred vision, redness, pain, conjunctivitis, ulcerations, tissue destruction, permanent eye damage, blindness.

Skin Effects: Corrosive- Causes severe irritation and burns. Concentrated solutions may cause: severe burns, severe necrosis, permanent skin damage. Prolonged and repeated exposure to dilute solutions may cause irritation, redness, pain and drying and cracking of the skin.

Inhalation Effects: Corrosive- Cause severe irritation and burns. Vapors and mists may damage: mucous membranes, respiratory tract. Vapors or mists may cause: coughing, sore throat, shortness of breath, labored breathing, choking, bronchospasms, chemical pneumonitis, pulmonary edema, death. Effects may be delayed. Chronic exposure may cause: dental erosions, discoloration of teeth, bronchitis, and bronchial emphysema.

Ingestion Effects: Corrosive- Causes severe irritation and burns. May cause damage to the: mouth, throat, esophagus, stomach, gastrointestinal tract. May cause: pain, vomiting, diarrhea, bleeding, labored breathing, burns or perforation of the gastrointestinal tract leading to ulceration and secondary infection, and death. Effects may be delayed. Aspiration into the lungs may cause chemical pneumonia and lung damage.

Chronic Effects: No data available.

Carcinogenicity: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC, ACGIH, NTP, or OSHA.

Mutagenicity: No data available.

Teratogenicity: No data available.

Fertility Effects: No data available.

Component	Oral LD50	Dermal LD50	Inhalation LC50
Potassium Hydroxide	No data available.	No data available.	No data available.
Morpholine	Rat: 1450 mg/kg	Rabbit: 500 mg/kg	Rat: 8000 mg/kg -8H
Sodium Sulfite	Rat: 3560 mg/kg	Rat: >2000 mg/kg	> 5500 mg/kg - 4H

Acute Toxicity Estimate (ATE):

Inhalation Vapor: No data available.

Inhalation Dust/Mist: No data available.

12

ECOLOGICAL INFORMATION

Sodium sulfite (7757-83-7) [<15%]

Information on ecological effects

Toxicity:

Toxicity to fish LC50 - Gambusia affinis (Mosquito fish) - 660 mg/l - 96 h.

Persistence and degradability: no data available

Bioaccumulative potential: no data available

Mobility in soil: no data available

Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects: no data available

Morpholine (110-91-8) [<6%]

Information on ecological effects

Toxicity:

Toxicity to fish LC50 - Oncorhynchus mykiss (rainbow trout) - 180 - 380 mg/l - 96 h.

Toxicity to daphnia EC50 - Daphnia magna (Water flea) - 100 mg/l - 24 h.

and other aquatic invertebrates

Toxicity to algae Growth inhibition LOEC - Desmodesmus subspicatus (green algae) - 80 mg/l - 72 h.

EC50 - Desmodesmus subspicatus (green algae) - > 310 mg/l - 72 h

Persistence and degradability: Biodegradability

Bioaccumulative potential: no data available

Mobility in soil: no data available

PBT and vPvB assessment: no data available

Other adverse effects: no data available

Potassium hydroxide (1310-58-3) [<6%]

Toxicity:

Toxicity to fish LC50 - Gambusia affinis (Mosquito fish) - 80 mg/l - 96 h.

Persistence and degradability: The methods for determining the biological degradability are not applicable to inorganic substances.

Bioaccumulative potential: no data available

Mobility in soil: no data available

Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life.

13

DISPOSAL CONSIDERATIONS

Dispose of in accordance with local, state, and federal regulations. Since emptied containers retain product residue, follow label warnings even after container is emptied. DO NOT pressurize, cut, weld, solder, drill, grind, or expose empty containers to heat, flame, sparks or other sources of ignition.

Hazardous Waste Number: D002

14

TRANSPORT INFORMATION

UN3266, Corrosive liquid, basic, inorganic, n.o.s., 8, PGII, (Potassium Hydroxide, Morpholine)

FEDERAL REGULATIONS

TSCA Inventory Status: All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements.

SARA Title III Section 311/312 Category:

Immediate(Acute) Health Hazard: YES

Delayed (Chronic) Health Hazard:NO

Fire Hazard: NO

Sudden Release of Pressure Hazard:NO

Reactive Hazard: YES

SARA Section 302/304/313/HAP:

Component	CERCLA RQ (LBS)	SARA RQ(LBS)	SARA TPQ(LBS)	SARA SEC 313	US EPA HAP
Potassium Hydroxide	1000	No data available.	No data available.	NO	NO
Morpholine	No data available.	No data available.	No data available.	NO	NO
Sodium Sulfite	No data available.	No data available.	No data available.	NO	NO

STATE REGULATIONS

California- The following components are listed under Prop 65: None.

Wisconsin- The following components are listed as a Wisconsin HAP: Morpholine, Potassium Hydroxide

HMIS III: Health = 3(Chronic), Fire = 0, Physical Hazard = 1

HMIS	
HEALTH	<input checked="" type="checkbox"/> 3
FLAMMABILITY	<input type="checkbox"/> 0
PHYSICAL HAZARD	<input type="checkbox"/> 1
PERSONAL PROTECTION	<input type="checkbox"/>

Contains Potassium Hydroxide which complies with CFR Title 21 Section 184.1631 and has been affirmed by GRAS (generally recognized as safe) by US FDA.

Publication Date: 5/26/2016

Prepared By: T Hartmann

Reason for Revision: Update to Section 9

This information is given in good faith and based on our current knowledge of the product.

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