Printing date 06/20/2024 Reviewed on 06/20/2024

1 Identification

· Product identifier

· Trade name: Sodium Phenate Reagent
APHA & EPA 350.1 for Ammonia

· Article number: 8710

· Details of the supplier of the safety data sheet

· Manufacturer/Supplier: Aqua Solutions, Inc. 6913 Highway 225 DEER PARK, TX 77536 USA 800-256-2586

· Information department: Technical Coordinator Sherman Nelson shermann@aquasolutions.org

• Emergency telephone number: Chemtrec: 800-424-9300 Canutec: 613-996-6666



*

2 Hazard(s) identification

· Classification of the substance or mixture



GHS06 Skull and crossbones

Acute Toxicity - Inhalation 3 H331 Toxic if inhaled.



GHS08 Health hazard

Germ Cell Mutagenicity 2 H341 Suspected of causing genetic defects.

Specific Target Organ Toxicity - Repeated Exposure 2 H373 May cause damage to organs through prolonged or repeated exposure.



GHS05 Corrosion

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

Eye Damage 1 H318 Causes serious eye damage.



GHS07

Acute Toxicity - Oral 4 H302 Harmful if swallowed.

Flammable Liquids 4 H227 Combustible liquid.

· Label elements

 $\cdot \textit{GHS label elements} \ \textit{The product is classified and labeled according to the Globally Harmonized System (GHS)}.$

(Contd. on page 2)

Printing date 06/20/2024 Reviewed on 06/20/2024

Trade name: Sodium Phenate Reagent APHA & EPA 350.1 for Ammonia

(Contd. of page 1)

· Hazard pictograms







GHS05

GHS06 GHS08

· Signal word Danger

· Hazard-determining components of labeling:

Phenol

Sodium Hydroxide

· Hazard statements

Combustible liquid.

Harmful if swallowed.

Toxic if inhaled.

Causes severe skin burns and eye damage.

Suspected of causing genetic defects.

May cause damage to organs through prolonged or repeated exposure.

· Precautionary statements

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Keep away from flames and hot surfaces. – No smoking.

Do not breathe dusts or mists.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

Wear protective gloves/protective clothing/eye protection/face protection.

If swallowed: Call a poison center/doctor if you feel unwell.

If swallowed: Rinse mouth. Do NOT induce vomiting.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a poison center/doctor.

IF exposed or concerned: Get medical advice/attention.

Specific treatment (see on this label).

Get medical advice/attention if you feel unwell.

Wash contaminated clothing before reuse.

In case of fire: Use CO2, powder or water spray to extinguish.

Store in a well-ventilated place. Keep container tightly closed.

Store in a well-ventilated place. Keep cool.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

- · Classification system:
- · NFPA ratings (scale 0 4)



Health = 2Fire = 0Reactivity = 1

(Contd. on page 3)

Printing date 06/20/2024 Reviewed on 06/20/2024

Trade name: Sodium Phenate Reagent

APHA & EPA 350.1 for Ammonia

(Contd. of page 2)

· HMIS-ratings (scale 0 - 4)



- · 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.

· Dangerous components:				
CAS: 108-95-2		8.125%		
CAS: 1310-73-2	Sodium Hydroxide	3.133%		
· Table of Nonhaz	· Table of Nonhazardous Ingredients			
CAS: 7732-18-5	Water	88.742%		

4 First-aid measures

- · Description of first aid measures
- · General information:

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Remove breathing apparatus only after contaminated clothing have been completely removed.

In case of irregular breathing or respiratory arrest provide artificial respiration.

· After inhalation:

Supply fresh air or oxygen; call for doctor.

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.

(Contd. on page 4)

Printing date 06/20/2024 Reviewed on 06/20/2024

Trade name: Sodium Phenate Reagent APHA & EPA 350.1 for Ammonia

(Contd. of page 3)

- · 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

· Personal precautions, protective equipment and emergency procedures

Mount respiratory protective device.

Wear protective equipment. Keep unprotected persons away.

· Environmental precautions:

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

· Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Use neutralizing agent.

Dispose contaminated material as waste according to section 13.

Ensure adequate ventilation.

· 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.

· Protective Action Criteria for Chemicals

· PAC-1:				
CAS: 108-95-2	Phenol	15 ppm		
CAS: 1310-73-2	Sodium Hydroxide	0.5 mg/m ³		
· PAC-2:	· PAC-2:			
CAS: 108-95-2	Phenol	23 ppm		
CAS: 1310-73-2	Sodium Hydroxide	5 mg/m³		
· PAC-3:	· PAC-3:			
CAS: 108-95-2		200 ppm		
CAS: 1310-73-2	Sodium Hydroxide	50 mg/m³		

7 Handling and storage

- · Handling:
- · Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols.

- · Information about protection against explosions and fires: 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.

(Contd. on page 5)

Printing date 06/20/2024 Reviewed on 06/20/2024

Trade name: Sodium Phenate Reagent

APHA & EPA 350.1 for Ammonia

(Contd. of page 4)

· 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 section 7.
- · Control parameters
- · Components with limit values that require monitoring at the workplace:

CAS: 108-95-2 Phenol

PEL Long-term value: 19 mg/m³, 5 ppm

Skin

REL Long-term value: 19 mg/m³, 5 ppm

Ceiling limit value: 60* mg/m³, 15.6* ppm

*15-min; Skin

TLV Long-term value: 5 ppm

Skin; BEI, A4

CAS: 1310-73-2 Sodium Hydroxide

PEL Long-term value: 2 mg/m³

REL Ceiling limit value: 2 mg/m³

TLV Ceiling limit value: 2 mg/m³

· Ingredients with biological limit values:

CAS: 108-95-2 Phenol

BEI 250 mg/g creatinine

LD50 Intraperitoneal: urine

Time: end of shift

LD50: Phenol with hydrolysis (background, nonspecific)

- · 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.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

· Breathing equipment:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation (Contd. on page 6)

- US

Printing date 06/20/2024 Reviewed on 06/20/2024

Trade name: Sodium Phenate Reagent

APHA & EPA 350.1 for Ammonia

(Contd. of page 5)

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· 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 be observed.

· Eye protection:



Water:

Tightly sealed goggles

· Body protection: Protective work clothing

9 Physical	and c	chemical	proper	rties

· Information on basic physical and o	chemical properties
General Information	
· Appearance:	
Form:	Liquid
Color:	Clear tan
· Odor:	Odorless
· Odor threshold:	Not determined.
· pH-value at 20 °C (68 °F):	>12
· Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	100 °C (212 °F)
· Flash point:	82 °C (179.6 °F)
· Flammability (solid, gaseous):	Not applicable.
· Auto igniting:	595 °C (1,103 °F)
· Decomposition temperature:	Not determined.
· Ignition temperature:	Product is not selfigniting.
· Danger of explosion:	Not determined.
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapor pressure at 20 °C (68 °F):	23 hPa (17.3 mm Hg)
· Density at 20 °C (68 °F):	1.0215 g/cm³ (8.52442 lbs/gal)
· Relative density	Not determined.
· Vapor density	Not determined.
Evaporation rate	Not determined.
· Solubility in / Miscibility with	

Fully miscible.

· Partition coefficient (n-octanol/water): Not determined.

(Contd. on page 7)

Printing date 06/20/2024 Reviewed on 06/20/2024

Trade name: Sodium Phenate Reagent

APHA & EPA 350.1 for Ammonia

		(Contd. of page 6
· Viscosity:		
Dynamic:	Not determined.	
Kinematic:	Not determined.	
· Solvent content:		
Organic solvents:	8.1 %	
Water:	88.7 %	
VOC content:	8.13 %	
	83.0 g/l / 0.69 lb/gal	
Solids content:	11.3 %	
· 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:		
ATE (Acute Toxicity Estimate)		
		1,207 mg/kg
Dermal	LD50	3,692 mg/kg
Inhalative	LC50/4h	6.15 mg/l

- · 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: Toxic

Harmful

Corrosive

Irritant

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

(Contd. on page 8)

Printing date 06/20/2024 Reviewed on 06/20/2024

Trade name: Sodium Phenate Reagent

APHA & EPA 350.1 for Ammonia

(Contd. of page 7)

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)

CAS: 108-95-2 Phenol

3

· 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:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- · Additional ecological information:
- · General notes:

Water hazard class 2 (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

Danger to drinking water if even small quantities leak into the ground.

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:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

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

14 Transport information

- · UN-Number
- · DOT, IMDG, IATA

UN3289

(Contd. on page 9)

Printing date 06/20/2024 Reviewed on 06/20/2024

Trade name: Sodium Phenate Reagent

APHA & EPA 350.1 for Ammonia

(Contd. of page 8) · UN proper shipping name Toxic liquid, corrosive, inorganic, n.o.s. (Sodium Hydroxide, Phenol) TOXIC LIQUID, CORROSIVE, INORGANIC, N.O.S. (Sodium · IMDG, IATA Hydroxide, Phenol) · Transport hazard class(es) $\cdot DOT$ 6.1 Toxic substances · Class · Label 6.1, 8 · IMDG · Class 6.1 Toxic substances · Label 6.1/8 \cdot IATA · Class 6.1 Toxic substances · Label 6.1 (8) · Packing group · DOT, IMDG, IATA II· Environmental hazards: · Marine pollutant: No · Special precautions for user Warning: Toxic substances · Hazard identification number (Kemler code): 61 · EMS Number: F-A,S-B· Segregation groups (SGG18) Alkalis · Stowage Category · Stowage Code SW2 Clear of living quarters. · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable. · Transport/Additional information: $\cdot DOT$ · Quantity limitations On passenger aircraft/rail: 1 L On cargo aircraft only: 30 L (Contd. on page 10)

Printing date 06/20/2024 Reviewed on 06/20/2024

Trade name: Sodium Phenate Reagent

APHA & EPA 350.1 for Ammonia

(Contd. of page 9)

· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 3289 TOXIC LIQUID, CORROSIVE, INORGANIC, N.O.S. (SODIUM HYDROXIDE, PHENOL), 6.1 (8), II

15 Regulatory information

- · Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.
- · Sara
- · Section 355 (extremely hazardous substances):

CAS: 108-95-2 Phenol

· Section 313 (Specific toxic chemical listings):

CAS: 108-95-2 Phenol

· TSCA (Toxic Substances Control Act):

Water	ACTIVE
Phenol	ACTIVE
Sodium Hydroxide	<i>ACTIVE</i>

· Hazardous Air Pollutants

CAS: 108-95-2 Phenol

- · 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)

CAS: 108-95-2 Phenol

D, I

· TLV (Threshold Limit Value)

CAS: 108-95-2 Phenol

A4

· 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).

(Contd. on page 11)

Printing date 06/20/2024 Reviewed on 06/20/2024

Trade name: Sodium Phenate Reagent

APHA & EPA 350.1 for Ammonia

(Contd. of page 10)

· Hazard pictograms







GHS05

GHS06

· Signal word Danger

· Hazard-determining components of labeling:

Phenol

Sodium Hydroxide

· Hazard statements

Combustible liquid.

Harmful if swallowed.

Toxic if inhaled.

Causes severe skin burns and eye damage.

Suspected of causing genetic defects.

May cause damage to organs through prolonged or repeated exposure.

· Precautionary statements

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Keep away from flames and hot surfaces. – No smoking.

Do not breathe dusts or mists.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

Wear protective gloves/protective clothing/eye protection/face protection.

If swallowed: Call a poison center/doctor if you feel unwell.

If swallowed: Rinse mouth. Do NOT induce vomiting.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a poison center/doctor.

IF exposed or concerned: Get medical advice/attention.

Specific treatment (see on this label).

Get medical advice/attention if you feel unwell.

Wash contaminated clothing before reuse.

In case of fire: Use CO2, powder or water spray to extinguish.

Store in a well-ventilated place. Keep container tightly closed.

Store in a well-ventilated place. Keep cool.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· 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.

- · Department issuing SDS: Environment protection department.
- · Contact:

Date of Preparation / Last Revision:

(Contd. on page 12)

Printing date 06/20/2024 Reviewed on 06/20/2024

Trade name: Sodium Phenate Reagent APHA & EPA 350.1 for Ammonia

(Contd. of page 11)

· Date of preparation / last revision

Revision 0.1, 06/19/2024: Reviewed SDS for accuracy. MH/STN

Creation date for SDS 10-07-2022. STN

06/20/2024 / 1.0

· Abbreviations and acronyms:

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation IATA: International Air Transport Association

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

Flammable Liquids 4: Flammable liquids - Category 4

Acute Toxicity - Oral 4: Acute toxicity - Category 4

Acute Toxicity - Inhalation 3: Acute toxicity - Category 3

Skin Corrosion 1A: Skin corrosion/irritation – Category 1A

Eye Damage 1: Serious eye damage/eye irritation – Category 1

Germ Cell Mutagenicity 2: Germ cell mutagenicity – Category 2

Specific Target Organ Toxicity - Repeated Exposure 2: Specific target organ toxicity (repeated exposure) - Category 2

* Data compared to the previous version altered.

HS.