



# Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) revised in 2012 and GHS Rev 03.

Issue date 10/01/2020

Reviewed on 10/01/2020

## \* 1 Identification

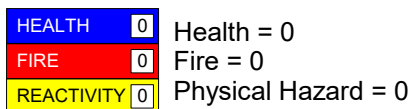
- **Product Identifier**
- **Trade Name:** pH/ORP Storage or Soaking Solution
- **Product Number:** CSH0ST – xx, PH-SS
- **Relevant identified uses of the substance or mixture and uses advised against:** Lab/Field use only
- **Product Description:** Storage or soaking solution for pH and ORP electrodes
- **Application of the substance / the mixture:** Conditioning Solution
- **Details of the Supplier of the Safety Data Sheet:**
- **Manufacturer/Supplier:**  
Analytical Sensors & Instruments, Ltd.  
10540 Rockley Road  
Houston, TX 77099  
832-456-4100  
www.asi-sensors.com
- **Emergency telephone number:** 832-456-4100

## 2 Hazard(s) Identification

- **Classification of the substance or mixture:**  
The product does not need classification according to OSHA HazCom Standard 29 CFR paragraph (d) of §1910.1200(g) and GHS Rev 03.
- **Label elements:**
- **Hazard pictograms:** Non-Regulated Material
- **Signal word:** Non-Regulated Material
- **Hazard statements:** Non-Regulated Material
- **Unknown acute toxicity:**  
0 % of the mixture consists of component(s) of unknown toxicity.
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**



- **Hazard(s) not otherwise classified (HNOC):** None known

## 3 Composition/Information on Ingredients

- **Non-hazardous components:**

7447-40-7	Potassium Chloride	15-35%
7732-18-5	Water, distilled water, deionized water	≥85%
877-24-7	potassium hydrogen phthalate	≤ 2.5%

- **Chemical characterization: Substance**
- **Description:** Mixture of substances listed below with non-hazardous additions.

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<b>· Dangerous Components:</b>		
CAS: 89-83-8 RTECS: XP 2275000	Thymol ⚠ Skin Corr. 1B, H314; ⚠ Aquatic Chronic 2, H411; ⚠ Acute Tox. 4, H302	≤ 2.5%
CAS: 111-30-8 RTECS: MA 2450000	Glutaraldehyde ⚠ Acute Tox. 3, H301; Acute Tox. 2, H330; ⚠ Resp. Sens. 1, H334; ⚠ Skin Corr. 1B, H314; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 2, H411; ⚠ Skin Sens. 1A, H317; STOT SE 3, H335; Flam. Liq. 4, H227	≤ 2.5%

**4 First-Aid Measures**

- **Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**  
Generally, the product does not irritate the skin.  
Rinse with warm water.  
If skin irritation occurs, consult a doctor.
- **After eye contact:**  
Rinse opened eye for several minutes under running water.  
If eye irritation occurs, consult a doctor.
- **After swallowing:** If swallowed and symptoms occur, consult 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:**  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** No further relevant information is available.
- **Special hazards arising from the substance or mixture:** No further relevant information available.
- **Advice for firefighters**
- **Special protective equipment for firefighters:**  
As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear to prevent contact with skin and eyes.

**6 Accidental Release Measures**

- **Personal precautions, protective equipment and emergency procedures:** Not required.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (i.e. sand, diatomite, acid binders, universal binders, sawdust).  
Dispose of the collected material according to regulations.
- **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**

<b>· PAC-1:</b>		
877-24-7	potassium hydrogen phthalate	9.6 mg/m <sup>3</sup>
111-30-8	Glutaraldehyde	0.2 ppm

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89-83-8	Thymol	2.9 mg/m <sup>3</sup>
<b>· PAC-2:</b>		
877-24-7	potassium hydrogen phthalate	110 mg/m <sup>3</sup>
111-30-8	Glutaraldehyde	1 ppm
89-83-8	Thymol	32 mg/m <sup>3</sup>
<b>· PAC-3:</b>		
877-24-7	potassium hydrogen phthalate	630 mg/m <sup>3</sup>
111-30-8	Glutaraldehyde	5 ppm
89-83-8	Thymol	190 mg/m <sup>3</sup>

### 7 Handling and Storage

**· Handling**

- Precautions for safe handling:** No special measures required.
- Information about protection against explosions and fires:** No special measures required.

**· Conditions for safe storage, including any incompatibilities****· Storage**

- Requirements to be met by storerooms and receptacles:** Store in the original container.
- Information about storage in one common storage facility:** Not required.
- Further information about storage conditions:**

The solution expires 6 months after the date it is made. On the expiration date, this solution should be disposed of. When disposing the solution, pour it into the sink directly. Then, keep the tap water running for at least five minutes.

- 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:**

All ventilation should be designed in accordance with OSHA standard (29 CFR 1910.94). Use mechanical (general) ventilation for storage areas. Use appropriate ventilation as required to keep Exposure Limits in Air below TLV & PEL limits.

**· Components with occupational exposure limits:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

- Additional information:** The lists that were valid during the creation of this SDS were used as basis.

**· Exposure controls:****· Personal protective equipment****· General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.

- Breathing equipment:** Not required.

- Protection of hands:** Not required.

- Material of gloves:** Not required.

- Penetration time of glove material:** Not applicable.

- Eye protection:**



Goggles recommended during refilling.

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### 9 Physical and Chemical Properties

**· Information on basic physical and chemical properties****· General Information****· Appearance:**

**Form:** Liquid  
**Color:** Clear, colorless

**· Odor:** Odorless

**· Odor threshold:** Not determined.

**· pH-value @ 20 °C (68 °F):** 3.6

**· Change in condition**

**Melting point/Melting range:** Not determined.

**Boiling point/Boiling range:** 100 °C (212 °F)

**· Flash point:** None

**· Flammability (solid, gaseous):** Not applicable.

**· Decomposition temperature:** Not determined.

**· Auto igniting:** Product is not self-igniting.

**· Danger of explosion:** Product does not present an explosion hazard.

**· Explosion limits:**

**Lower:** 0.0 Vol %

**Upper:** 0.0 Vol %

**· Vapor pressure @ 20 °C (68 °F):** 23 hPa (17.3 mm Hg)

**· Density @ 20 °C (68 °F):** 1.148 g/cm<sup>3</sup> (9.5801 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:**

**Dynamic:** Not determined.

**Kinematic:** Not determined.

**· Solvent content:**

**Organic solvents:** 0.0 %

**Water:** >85 %

**Solids content:** 15-35 %

**· Other information:** No further relevant information available.

### 10 Stability and Reactivity

**· Reactivity:** No further relevant information available.

**· Chemical stability:** Stable under normal conditions.

**· 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.

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### Trade Name: pH/ORP Storage or Soaking Solution

- **Incompatible materials:** Strong acids and strong oxidizing agents.
- **Hazardous decomposition products:**  
Aldehydes, Carbon Oxides, Nitrogen Oxides (NO<sub>x</sub>), Potassium Oxides and Hydrochloric acid gas.

## \* 11 Toxicological Information

- **Information on toxicological effects:**
- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

### 7447-40-7 Potassium Chloride

Oral	LD50	2,600 mg/kg (Rat)
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### 111-30-8 Glutaraldehyde

Oral	LD50	134 mg/kg (Rat)
Dermal	LD50	2,560 mg/kg (Rabbit)
Inhalative	LC50/4 h	0.48 mg/l (Rat)

### 89-83-8 Thymol

Oral	LD50	980 mg/kg (Rat)
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- **Primary irritant effect:**
- **On the skin:** No irritating effect.
- **On the eye:** No irritating effect.
- **Additional toxicological information:**  
The product is not subject to classification according to internally approved calculation methods for preparations.  
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

- **Carcinogenic categories:**

- **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.

## 12 Ecological Information

- **Toxicity:** The hazards for the aquatic environment are unknown.

- **Aquatic toxicity:**

### 111-30-8 Glutaraldehyde

EC50	0.61 mg/l (Green algae)
	0.75 mg/l (Water flea)

- **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:** Not known to be hazardous to water.
- **Results of PBT and vPvB assessment:**
- **PBT:** Not applicable.

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**Trade Name: pH/ORP Storage or Soaking Solution**

- **vPvB:** Not applicable.
- **Other adverse effects:** No further relevant information available.

**13 Disposal Considerations**

- **Waste treatment methods**
- **Recommendation:**  
Observe all federal, state and local environmental regulations when disposing of this material. When disposing this solution, pour it into the sink directly. Then, keep the tap water running for at least five minutes.
- **Uncleaned packaging**
- **Recommendation:**  
Dispose of as unused product.  
Disposal must be made according to official regulations.

**14 Transport Information**

- **UN-Number:**
- **DOT, ADN, IMDG, IATA** Non-Regulated Material
- **ADR/ADN** Non-Regulated Material  
Not Regulated
- **UN proper shipping name:**
- **DOT, ADR/ADN, ADN, IMDG, IATA** Non-Regulated Material
- **Transport hazard class(es):**
- **DOT, ADR/ADN, ADN, IMDG, IATA**
- **Class:** Non-Regulated Material
- **Packing group:**
- **DOT, ADR/ADN, IMDG, IATA** Non-Regulated Material
- **Environmental hazards:** Not applicable.
- **Special precautions for user:** Not applicable.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:** Not applicable.
- **UN "Model Regulation":** Non-Regulated Material

**15 Regulatory Information**

- **Safety, health and environmental regulations/legislation specific for the substance or mixture:**
- **SARA (Superfund Amendments and Reauthorization):**

· **Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

· **Section 313 (Specific toxic chemical listings):**

None of the ingredients are listed.

· **TSCA (Toxic Substances Control Act):**

7447-40-7	Potassium Chloride	ACTIVE
877-24-7	potassium hydrogen phthalate	ACTIVE
111-30-8	Glutaraldehyde	ACTIVE
89-83-8	Thymol	ACTIVE
7732-18-5	Water, distilled water, deionized water	ACTIVE

· **Hazardous Air Pollutants**

None of the ingredients are listed.

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**Trade Name: pH/ORP Storage or Soaking Solution****· California Proposition 65:****· Chemicals known to cause cancer:**

None of the ingredients are listed.

**· Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

**· Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

**· Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

**· New Jersey Right-to-Know List:**

111-30-8 | Glutaraldehyde

**· New Jersey Special Hazardous Substance List:**

None of the ingredients are listed.

**· Pennsylvania Right-to-Know List:**

111-30-8 | Glutaraldehyde

**· Pennsylvania Special Hazardous Substance List:**

None of the ingredients are listed.

**· Carcinogenic categories:****· EPA (Environmental Protection Agency):**

None of the ingredients are listed.

**· TLV (Threshold Limit Value established by ACGIH):**

111-30-8 | Glutaraldehyde

A4

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

None of the ingredients are listed.

**· GHS label elements** Non-Regulated Material**· Hazard pictograms:** Non-Regulated Material**· Signal word:** Non-Regulated Material**· Hazard statements:** Non-Regulated Material**· National regulations:**

None of the ingredients are listed.

**· Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.**16 Other Information**

The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create warranty, expressed or implied, and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this information and the suitability of the material or product for any particular purpose.

**· Date of last revision/ revision number:** 10/01/2020 / 5**· Abbreviations and acronyms:**

ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road

ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

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

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CAS: Chemical Abstracts Service (division of the American Chemical Society)  
NFPA: National Fire Protection Association (USA)  
HMIS: Hazardous Materials Identification System (USA)  
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 and Health  
OSHA: Occupational Safety & Health Administration  
TLV: Threshold Limit Value  
PEL: Permissible Exposure Limit  
REL: Recommended Exposure Limit  
Flam. Liq. 4: Flammable liquids – Category 4  
Acute Tox. 3: Acute toxicity – Category 3  
Acute Tox. 4: Acute toxicity – Category 4  
Acute Tox. 2: Acute toxicity – Category 2  
Skin Corr. 1B: Skin corrosion/irritation – Category 1B  
Resp. Sens. 1: Respiratory sensitisation – Category 1  
Skin Sens. 1A: Skin sensitisation – Category 1A  
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3  
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1  
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

**\* Data compared to the previous version altered.**

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