

**1. Identification**

Name of the product: Activation Solution SDS Code: HCI AS  
Recommended use: Base for electrolytic solution  
Use not recommended: Not for any use involving body contact or ingestion.  
Company: Healthier Cleaning Innovations LLC, Force Of Nature  
7 Grassy Lane  
Westford, MA 01886  
Telephone: TBD  
e mail: TBD  
Emergency Number: TBD

**2. Hazard(s) identification**

Classification of the mixture per 29 CFR 1910 (OSHA HCS):  
Eye irritation, Category 2A H319 Causes serious eye irritation.  
Skin irritation, Category 3 H315 Causes skin irritation

Pictogram:



Signal word: Caution

Label elements, including precautionary statements  
H319 Causes serious eye irritation.  
H315 Causes skin irritation  
P281 Use personal protective equipment as required

**3. Composition / Information on ingredients**

Chemical identity: Acetic acid 2.1%  
Common name: Vinegar  
Numbers of identity: CAS 64-19-7  
Impurities: None known.  
The remainder of the ingredients and percentages are retained as being non hazardous per §1910.1200D.

**4. First-aid measures**

P301+330+331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting  
P302+353 IF ON SKIN: Rinse skin with water.  
P304+341 IF INHALED: If breathing is difficult, 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.  
Most important symptoms and effects, both acute and delayed: eye irritation. Skin irritation.

**5. Firefighting measures**

Suitable extinguishing media : Product is not flammable.  
Use equipment appropriate for the main cause of a fire.  
Precautions: Special protective equipment for firefighters: No special protective equipment required.  
Flash point: Does not flash.  
Autoignition temperature: Does not ignite.  
Specific hazards in case of fire: Acetic acid fumes produced if heated.  
Special protective equipment and precaution for fire fighters:  
Wear self contained breathing apparatus for fire fighting if necessary.

## 6. Accidental release measures

Personal precautions:

Spill may be slippery. Avoid breathing vapors.

Environmental precautions:

Prevent spills from entering storm sewers or drains and contact with soil.

Methods and materials for containment and cleaning up:

Vacuum or mop up for possible use or reclaim. Common industrial absorbents may be used.

Dispose as non hazardous waste.

## 7. Handling and storage

Precautions for safe handling:

Avoid contact with eyes. Avoid prolonged or repeated skin contact and breathing mists/vapors.

Conditions for safe storage, including incompatibilities:

Standard safe storage conditions are appropriate: avoid package damage and extremes in temperature: below 32° and above 120°F. Keep package closed tightly.

## 8. Exposure controls / personal protection

Information on the system design:

Product is intended for external use only. Stay up wind, out of any spray developed.

Exposure Limits:

Reference 29CFR 1910.1000 Table Z-1

Component Name (CAS)

TWA

STEL

Skin

ppm mg/m3

ppm mg/m3

Acetic acid 64-19-7

10 ppm

15 ppm

NE

NE= Not Established

Personal protective equipment

Respiratory protection: No requirement anticipated.

Hand protection: Rubber gloves in the case of extended exposure.

Eye protection: Safety glasses with side-shields if splashing is anticipated.

Skin and body protection: Chemical resistant apron or protective suit if splashing or repeated contact with solution is likely.

Hygiene measures : Wash hands and face before breaks and immediately after handling the product.

Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

Appearance: Clear colorless liquid

Odor: Vinegar, acetic acid

Odor threshold: 0.48 ppm

pH-value: Acid

Melting point: Not available

Freezing Point: Not available

Initial boiling point: Not available

Flash point: Does not flash.

Evaporation rate: Not available

Flammability (solid, gas): Not applicable

Explosion limits: Not explosive

Vapor pressure: (highest partial vapor pressure) at 20°C: Not available

Vapor density: Not available

Relative density (water=1.00): Not available

Solubility: Totally soluble in water at 20°C

Partition coefficient: Log Kow = Not applicable to mixture.

Auto-ignition temperature: Not available

Decomposition temperature: Not available

Viscosity: Like water

**10. Stability and reactivity**

Chemical stability: No decomposition, if used according to specifications.  
 Possibility of hazardous reactions: None known.  
 Conditions to avoid: No dangerous conditions known.  
 Materials to avoid: No common materials present a hazard.  
 Hazardous decomposition products: None are known. Also see Section 5.

**11. Toxicological information**

Acute Toxicity: No information available for finished product.

Test	Acetic acid (Glacial)
Oral Toxicity LD 50 (Rats)	3310 mg/kg
Dermal Toxicity LD 50 (Rabbit)	No data
Inhalation Toxicity, Vapor	5620 ppm 1h mouse
Eye Irritation (Rabbit)	Serious damage (rabbit)
Dermal Irritation (Rabbit)	1112 mg/kg

Likely/ possible routes of exposure: Ingestion, skin and eye contact.

Skin: The product is not expected to be toxic by skin absorption.

Oral: The product is not expected to be toxic by ingestion.

Inhalation: The product is not expected to be toxic by inhalation.

H305 May be harmful if swallowed and enters airways

Irritation

H315 Causes skin irritation

H319 Causes serious eye irritation

Sensitization: The product is not expected to be sensitizing.

Chronic toxicity: Prolonged skin contact may defat the skin and produce dermatitis.

Carcinogenicity: No component listed by NTP, IARC, OSHA or ACGIH as a suspect or potential carcinogen.

Summary Comments: Product may have a drying effect on the skin; frequent or prolonged contact may cause flaking or cracking of the skin.

**12. Ecological information**

Persistence and degradability:

This product is expected to be inherently biodegradable.

Bio-accumulative potential: There is no evidence to suggest bioaccumulation will occur.

Mobility: Accidental spillage may lead to penetration in the soil and groundwater. However, there is no evidence that this would cause adverse ecological effects.

Ecotoxicity: The product has not been tested.

Mobility in soil: No data available.

Results of PBT and vPvB assessment: No data available

Other adverse effects: No data available.

**13. Disposal considerations**

Product as supplied is not an unlisted hazardous waste.

Typical anticipated discharge will be to sanitary sewer.

Dispose in accordance with local, state and federal regulations. See Section 8.

**14. Transport information**

Domestic transport: Not classified as dangerous goods under transport regulations.

Sea transport (IMDG): Not classified as dangerous goods under transport regulations.

Air transport (IATA/CAO): Not classified as dangerous goods under transport regulations.  
 This information is not intended to convey all specific regulatory or operational requirements or information relating to this product. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

## 15. Regulatory information

Inventory Status:

All components are on TSCA, EINECS/ELINCS, AICS, and DSL.

U.S. Regulations:

U.S. Superfund Amendments and Reauthorization Act (SARA) Title III:

SARA (311/312) HAZARD CATEGORIES: None

Marine pollutant: None

SARA 313: This product contains the following SARA 313 Toxic Release Chemicals.

Chemical Name	CAS Number	Concentration
None	Not applicable	Not applicable

The following product components are cited on the lists below:

Chemical Name	CAS Number	List Citations
Acetic acid	64-19-7	MA, PA, NJ
Sodium chloride	7647-14-5	PA, NJ

## 16. Other information

MSDS Preparation date: September 17, 2014

California Prop. 65 chemicals: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Hazard Categories:	Health	Fire	Pressure	Reactivity	Reference
Immediate	Yes	No	No	No	49 CFR 171.8, OSHA 29 CFR 1910.1200 and SARA 302/311/312/313.
Delayed	No	No	XXX	XXX	
HMIS Hazard ratings: Health 1 Fire 0 Instability 0 Other B (Goggles, gloves)					
Hazard Ratings: Least: 0 Slight: 1 Moderate: 2 High: 3 Extreme: 4					

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MSDS's found from ingredient suppliers do not provide sufficient information for complete categorization of the hazards as of the date of preparation of this document. Expert opinion and judgment has been used where deemed necessary and appropriate.