

Force of Nature Activator Solution Safety Data Sheet

Section 1: Identification

Product Identifier: Force of Nature Activator Solution

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Westford, MA 01886

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Website: www.forceofnatureclean.com

Emergency Phone Number: 888-895-8099

Relevant Use: For use in Force of Nature Electrolyzed Water device.

EPA Registration Number: 93040-1

This SDS is designed for workplace employees, emergency personnel and for other conditions and situations where there is greater potential for large-scale or prolonged exposure, in accordance with the requirements of USDOL Occupational Safety and Health Administration.

This SDS is not applicable for consumer use of our products. For consumer use, all precautionary and first aid language is provided on the product label in accordance with the applicable government regulations, and shown in Section 15 of this SDS.

Section 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



Label elements, including precautionary statements

H319 Causes serious eye irritation

H315 Causes skin irritation

P281 Use Personal protective equipment as required

Section 3: Composition / Information on ingredients

Substances

Chemical Identity: Acetic Acid

Common Name: Vinegar

Identifier: CAS 64-19-7

Impurities: None known

The remainder of the ingredients and percentages are non hazardous per §1910.1200D.

Mixture

Description of the mixture

Name of Substance	CAS No	Weight %*
DI Water	7732-18-5	70% - 84%
Acetic Acid	64-19-7	1% - 5%
Sodium Chloride	7647-14-5	15% - 25%

* Exact composition is a trade secret.

Section 4: First-aid measures

Description of first-aid measures

First-aid measures general	Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. Never give anything by mouth to an unconscious individual.
First-aid measures after ingestion	Rinse mouth. Do NOT induce vomiting.
First-aid measures after skin contact	Rinse skin with water
First-aid measures after inhalation	If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
First-aid measures after eye contact	Immediately flush with large amounts of water, holding eyelids open, for at least 20 minutes. Repeat if necessary. Remove contact lenses, if present and easy to do. Seek medical assistance if irritation persists.

Most important symptoms and effects, both acute and delayed

Symptoms/injuries after ingestion	No hazard in normal use. If accidentally ingested in large quantities, may cause gastrointestinal distress.
Symptoms/injuries after skin contact	Prolonged contact with material may irritate skin.
Symptoms/injuries after inhalation	Prolonged or excessive inhalation may cause respiratory tract irritation.
Symptoms/injuries after eye contact	Irritating to the eyes.

Indication of needed immediate medical care and special treatment: No additional information available.

Section 5: Fire-fighting measures

Extinguishing media

Product is not flammable

Special hazards arising from the substance or mixture

Acetic acid fumes produced if product is heated.

Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

Section 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

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.

Section 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 any incompatibilities

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

Section 8: Exposure controls / personal protection

Control Parameters

Activator Solution	
ACGIH	Not established
OSHA	Not established

Acetic Acid (64-19-7)		
ACGIH	ACGIH (TWA) (mg/m3)	25 mg/m3
ACGIH	ACGIH (TWA) (ppm)	10 ppm
ACGIH	ACGIH (STEL) (mg/m3)	37 mg/m3
ACGIH	ACGIH (STEL) (ppm)	15 ppm
OSHA	OSHA PEL (TWA) (mg/m3)	25 mg/m3
OSHA	OSHA PEL (TWA) (ppm)	10 ppm
NIOSH	NIOSH REL (TWA) (mg/m3)	25 mg/m3
NIOSH	NIOSH REL (TWA) (ppm)	10 ppm
NIOSH	NIOSH REL (STEL) (mg/m3)	37 mg/m3
NIOSH	NIOSH REL (STEL) (ppm)	15 ppm

Exposure controls

Appropriate engineering controls
 General ventilation

Personal protection measures

Respiratory protection - none required
 Hand protection – Butyl rubber (or equivalent) gloves in 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.

Section 9: Physical and chemical properties

Appearance	Clear colorless liquid
Explosive Limits	None
Odor	Vinegar, acetic acid
Odor threshold	0.48 ppm
Vapor Pressure	Not available
Relative Vapor Density	Not available
pH	1.6 – 2.1
Relative Density	1.1 -1.2
Melting Point / Freezing Point	Not available
Solubility	Soluble in water
Boiling point	Not available
Flash point	Does not flash
Evaporation rate	Not available
Flammability	Not flammable
Partition coefficient	Not available
Auto-ignition temperature	Not applicable
Decomposition temperature	Not available
Viscosity	Like water

Section 10: Stability and reactivity

Reactivity

See: Conditions to avoid

Chemical stability

No decomposition, if used according to specifications.

Conditions to avoid

No dangerous conditions known.

Incompatible materials

Oxidizers

Hazardous decomposition products

None are known. Also see Section 5.

Section 11: Toxicological information

Information on Toxicological Effects

No information available for the Activator Solution.

Acetic Acid (64-19-7)	
LD50 oral rat	3310 mg/kg
LD50 dermal rabbit	1130 mg/kg
ATE US (oral)	3310 mg/kg body weight
ATE US (dermal)	1130 mg/kg body weight
Inhalation toxicity, vapor mouse	5620 ppm/hr
Eye irritation rabbit	Serious damage

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

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

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

Inhalation: The Activator Solution 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 Activator Solution 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

Section 12: Ecological information

Toxicity

Acetic Acid (64-19-7)	
LC50 fish	88 mg/l
LC50 daphnia	90.1 mg/l

The Activator Solution is not classified as hazardous to the aquatic environment.

Persistence and degradability

The Activator Solution is inherently biodegradable. It biodegrades readily under aerobic and anaerobic conditions and is not classed as hazardous to the aquatic environment.

Bioaccumulation potential

There is no evidence to suggest bioaccumulation will occur.

Mobility in soil

No additional information available

Other adverse effects

No know ecological damage caused by the Activator Solution that would impact global warming.

Section 13: Disposal considerations

Activator Solution as supplied is not an unlisted hazardous waste. Typical anticipated discharge will be to a sanitary sewer. Dispose in accordance with local, state and federal regulations.

Section 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.

Section 15: Regulatory Information

US Federal Regulations

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

Superfund Amendment and Reauthorization Act (SARA TITLE III) (EPCRA Section 302) - No components are listed

RQ (Reportable Quantity, Section 304 of EPA’s List of Lists): 5000 Lb (Acetic Acid)

US SARA EPCRA Sections 311, 312, or 313 - No components are listed

US State Regulations

California Proposition 65 – The Activator Solution does not contain any substances known to the state of California to cause cancer and/or reproductive harm.

The following product components are cited on the lists below:

Chemical Name	CAS	List Citations
Acetic Acid	64-19-7	MA, PA, NJ, DE, IA, NY, WA
Sodium Chloride	7647-14-5	PA, NJ

Section 16: Other

SDS Prepared: November 11, 2020

Key literature references and sources for data

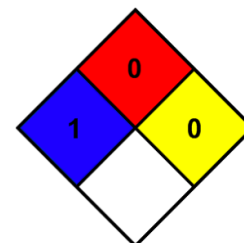
OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.
 Transport of dangerous goods by road or rail (49 CFR US DOT). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties: The classification is based on tested mixture.
 Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

NFPA National Fire Protection Association (USA)

NFPA Health Hazard	1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.
NFPA Fire Hazard	0 - Materials that will not burn
NFPA Reactivity	0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



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Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

HMIS Hazardous Material Information System (USA)

Health	1
Flammability	0
Physical hazards	0
Personal protection	A

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The customer is responsible for determining the PPE code for this material.

Disclaimer

The information contained herein is believed to be accurate but is not warranted to be so. Data and calculation are based on information furnished by the manufacturers of the components of the product. Users are advised to confirm in advance of need that information is current, applicable and suited to the circumstance of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Any questions regarding this product should be directed to the manufacturer of the product as described in section 1. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. HCI Cleaning Products, LLC Shall not be held liable for any damage resulting from handling or from contact with the above product.