

SAFETY DATA SHEET (SDS)**SECTION 1 - IDENTIFICATION****PRODUCT NAME:** *Chloridometer Acid Reagent (Part # 4425065, 4425068)*Labconco Corporation
8811 Prospect Ave
Kansas City, MO 64132
Telephone (816) 333-8811**Emergency Telephone Number:**
CHEMTREC (24 hour service)
1-800-424-9300
Outside USA 011-703-527-3887**SECTION 2 – HAZARD(S) IDENTIFICATION****2.1 Classification of the Substance or Mixture**

Hazard Class	Category	Hazard Statement	Precautionary Statements
Acute Toxicity - Inhalation	Category 3	H331	P261, P271, P304+P340, P311, P321, P403+P233, P405, P501
Skin Corrosion / Irritation	Category 2	H315	P264, P280, P302+P352, P321, P332+P313, P362
Eye Damage / Irritation	Category 2A	H319	P264, P280, P305+P351+P338, P337+P313
Specific Target Organs/Systemic Toxicity Following Single Exposure	Category 1	H370	P260, P264, P270, P307+P311, P321, P405, P501
Specific Target Organs/Systemic Toxicity Following Repeated Exposure	Category 1	H372	P260, P264, P270, P314, P501

2.2 GHS Label Elements

Pictograms:

Signal Word: **Danger****Hazard Statements:**

Hazard Number	Hazard Statements
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H370	Causes damage to organs.
H372	Causes damage to organs through prolonged or repeated exposure.

Precautionary Statements:

Precautionary Number	Precautionary Statements
P260	Do not breathe dust, fumes or mist.
P261	Avoid breathing dust, fumes or mist.
P264	Wash arms, hands and face thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves and eye protection.
P301+P330+P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P307+P311	IF exposed: Call a POISON CENTER or physician.
P310	Immediately call a POISON CENTER or doctor/physician.
P311	Call a POISON CENTER or physician.
P314	Get medical attention if you feel unwell.
P321	Specific treatment (Wash areas of contact with water immediately).
P332+P313	If skin irritation occurs: Get medical attention.
P337+P313	If eye irritation persists: Get medical attention.
P362	Take off contaminated clothing and wash it before reuse.
P363	Wash contaminated clothing before reuse.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents in accordance with local, state, federal and international regulations.

2.3 Other Hazards

Other hazards not contributing to the classification None.

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS**3.1 Components of Substance or Mixture**

NAME	CAS#	FORMULA	WEIGHT %
Acetic Acid	CAS # 64-19-7	CH ₃ COOH	10.5%
Nitric Acid	CAS # 7697-37-2	HNO ₃	0.63%
Sodium Chloride	CAS # 7647-14-5	NaCl	-
Polyvinyl Alcohol	CAS # 9002-89-5	(C ₂ H ₄ O) _x	0.90%
Water	CAS # 7732-18-5	H ₂ O	~88%

SECTION 4 – FIRST-AID MEASURES

4.1 Routes of Entry (Emergency and First Aid Procedures)

EYES:	Immediately flush eyes with Water for at least 15 minutes. Call a physician.
INHALATION:	Remove to fresh air. Give artificial respiration if not breathing. Call a physician.
INGESTION:	Do NOT Induce Vomiting unless directed by medical personnel. Get medical attention.
SKIN:	Flush exposed area immediately with water. Cover irritated skin with an emollient. Remove contaminated clothing. Get medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms/injuries:	Causes severe skin burns and eye damage.
Symptoms/injuries after eye contact:	Causes serious eye damage.

4.3 Indication of any immediate medical attention and special treatment needed

Obtain medical assistance.

SECTION 5 – FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media:	Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media:	Do not use heavy water stream.

5.2 Special hazards arising from the substance or mixture

Reactivity:	Thermal decomposition generates: Corrosive vapors.
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5.3 Advice for firefighters

Firefighting instructions:	Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.
Protection during firefighting:	Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel

Protective equipment:	Safety glasses. Gloves. Protective clothing.
Emergency procedures:	Evacuate unnecessary personnel.

6.1.2 For emergency responders

Protective equipment:	Equip cleanup crew with proper protection.
Emergency procedures:	Ventilate area.

6.2 Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up:	Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.
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6.4 Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7 – HANDLING AND STORAGE

7.1 Precautions for safe handling

Precautions for safe handling:

Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Do not breathe mist, vapors, spray.

Hygiene measures:

Wash exposed skin thoroughly after handling. Wash contaminated clothing before reuse.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures:

Comply with applicable regulations.

Storage conditions:

Keep container closed when not in use.

Incompatible products:

Strong oxidizers. Metals. Strong bases.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Acetic Acid (64-19-7)

USA ACGIH	ACGIH TWA (ppm)	10 ppm
USA ACGIH	ACGIH STEL (ppm)	10 ppm
USA OSHA	OSHA PEL (TWA) (mg/m ³)	25 mg/m ³
USA OSHA	OSHA PEL (TWA) (ppm)	10 ppm

Nitric Acid (7697-37-2)

USA ACGIH	ACGIH TWA (ppm)	2 ppm
USA ACGIH	ACGIH STEL (ppm)	4 ppm
USA OSHA	OSHA PEL (TWA) (ppm)	2 ppm
USA OSHA	OSHA PEL (mg/m ³)	5 mg/m ³

8.2 Exposure controls

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Personal protective equipment:

Avoid all unnecessary exposure.

Hand protection:

Wear protective gloves.

Eye protection:

Chemical goggles or face shield.

Skin and body protection:

Wear suitable protective clothing.

Respiratory protection:

Wear appropriate mask.

Other information:

Do not eat, drink or smoke during use.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state:

Liquid

Color:

Colorless

Odor:

Vinegar with faint acrid odor

Odor threshold:

No data available

pH:

No data available

Relative evaporation rate (butylacetate=1):

No data available

Melting point:

No data available

Freezing point:

No data available

Boiling point:

No data available

Flash point:

No data available

Self-ignition temperature:

No data available

Decomposition temperature:

No data available

Flammability (solid, gas):	No data available
Vapor pressure:	No data available
Relative vapor density at 20°C:	No data available
Relative density:	No data available
Density:	1.01 g/ml
Solubility:	Soluble in water
Viscosity:	No data available
Explosive properties:	No data available
Oxidizing properties:	No data available
Explosive limits:	No data available

SECTION 10 – STABILITY AND REACTIVITY

10.1 Reactivity

Thermal decomposition generates: Corrosive vapors.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Not established.

10.4 Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5 Incompatible materials

Strong oxidizers. Metals. Strong bases.

10.6 Hazardous decomposition products

Carbon monoxide. Carbon dioxide. Thermal decomposition generates: Corrosive vapors.

SECTION 11 – TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity: Not classified

Water (7732-18-5)

LD50 oral rat	≥90000 mg/kg
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Skin corrosion/irritation: Causes severe skin burns and eye damage.

Serious eye damage/irritation: Causes eye damage.

Respiratory or skin sensitization: Not classified.

Germ cell mutagenicity: Not classified.

Carcinogenicity: Not classified.

Reproductive toxicity: Not classified.

Specific target organ toxicity (single exposure):

Causes damage to organs. Do not breathe dust, fumes or mist. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. IF exposed: Call a POISON CENTER or physician.

Specific treatment (Wash areas of contact with water immediately). Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Specific target organ toxicity (repeated exposure):

Causes damage to organs through prolonged or repeated exposure. Do not breathe dust, fumes or mist. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. Get medical attention if you feel unwell. Dispose of contents in accordance with local, state, federal and international regulations.

Aspiration hazard: Not classified.

SECTION 12 – ECOLOGICAL INFORMATION

12.1 Toxicity

Acetic Acid (64-19-7)

LC50 fishes 1	75 mg/l (96 h; <i>Lepomis macrochirus</i>)
EC50 Daphnia 1	47 mg/l (24 h; <i>Daphnia magna</i> ; Not neutralized)
EC50 other aquatic organisms 1	> 5000 mg/l (5 h; Activated sludge)
LC50 fish 2	94 mg/l (96 h; <i>Oryzias latipes</i>)
EC50 Daphnia 2	95 mg/l (24 h; <i>Daphnia magna</i> ; Static system)
TLM fish 1	100 ppm (96 h; <i>Carassius auratus</i>)
Threshold limit algae 1	90 mg/l (192 h; <i>Microcystis aeruginosa</i> ; Neutralized)
Threshold limit algae 2	4000 mg/l (192 h; <i>Scenedesmus quadricauda</i> ; Neutralized)

12.2 Persistence and degradability

Acetic Acid, 2.0N (2.0M)

Persistence and degradability	Not established.
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Acetic Acid (64-19-7)

Persistence and degradability	Readily biodegradable in water. Inherently biodegradable. Biodegradable in the soil.
Biochemical oxygen demand (BOD)	0.6 – 0.74 g O ₂ /g substance
Chemical oxygen demand (COD)	1.03 g O ₂ /g substance
ThOD	1.07 g O ₂ /g substance
BOC (% Of ThOD)	0.56 – 0.69% ThOD

Water (7732-18-5)

Persistence and degradability	Not established.
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12.3 Bioaccumulative potential

Acetic Acid, 2.0N (2.0M)

Bioaccumulative potential	Not established.
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12.4 Mobility in soil

Acetic Acid (64-19-7)

Surface tension	Not available.
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SECTION 13 – DISPOSAL CONSIDERATIONS

Waste Disposal Method: Dispose of any unused reagent or collection absorbent. Observe all national and local environmental regulations.

SECTION 14 – TRANSPORT INFORMATION

In accordance with DOT

Transport document description:

UN3264, CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (ACETIC ACID, NITRIC ACID), 8, III, RQ

UN-No. (DOT):

3264

DOT NA no.:

UN3264

DOT Proper Shipping Name:

Corrosive Liquid, Acidic, Inorganic, N.O.S. (Acetic Acid, Nitric Acid)

Department of Transportation (DOT)

8 – Class 8 – Corrosive material 49 CFR 173.136

Hazard Classes:

Hazard labels (DOT):

8 – Corrosive substances



Packing group (DOT):

III – Minor Danger

DOT Packaging Non Bulk 49 CFR 173.xxx): 203
 DOT Quantity Limitations Passenger 5 L
 aircraft/rail (49 CFR 173.27):
 DOT Quantity Limitations Cargo aircraft 60 L
 only (49 CFR 175.75):

SECTION 15 – REGULATORY INFORMATION

15.1 US Federal regulations

Acetic Acid + Nitric Acid

SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard
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Acetic Acid + Nitric Acid + Water

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2 International regulations

CANADA

Acetic Acid (64-19-7)

WHMIS Classification	Class B Division 3 – Combustible Liquid Class E – Corrosive Material
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Nitric Acid (7697-37-2)

WHMIS Classification	Class E – Corrosive Material
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Water (7732-18-5)

WHMIS Classification	Uncontrolled product according to WHMIS classification criteria
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EU-Regulations

No additional information available.

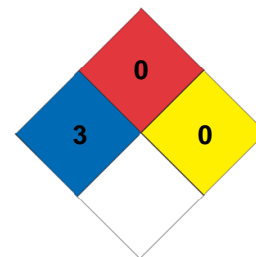
SECTION 16 – OTHER INFORMATION

Last Updated: 9/15/2017

Full text of H-phrases: see section 16:

Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Flam. Liq. 3	Flammable liquids, Category 3
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
Skin Corr. 1C	Skin corrosion/irritation, Category 1C
H226	Flammable liquid and vapor
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage

NFPA health hazard: 3 – Short exposure could cause serious temporary or residual injury even though prompt medical attention was 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.



HMIS III Rating

Health: 3 Serious Hazard – Major injury likely unless prompt action is taken and medical treatment is given.
 Flammability: 0 Minimal Hazard
 Physical: 0 Minimal Hazard
 Personal Protection: H