

Safety Data Sheet

acc. to OSHA HCS

Printing date 02/21/2025

Reviewed on 02/21/2025

1 Identification

- **Product identifier**
- **Trade name:** Mixed Metals ICP 10.0 ppm
Stock Standard
- **Article number:** VEN037
- **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**



GHS05 Corrosion

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

Eye Damage 1 H318 Causes serious eye damage.

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS05

- **Signal word** *Danger*
- **Hazard-determining components of labeling:**
Nitric Acid
- **Hazard statements**
Causes severe skin burns and eye damage.
- **Precautionary statements**
Do not breathe dusts or mists.
Wash thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
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.
Specific treatment (see on this label).

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Wash contaminated clothing before reuse.

Store locked up.

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

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 3

Fire = 0

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 3

Fire = 0

Reactivity = 0

· **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: 7697-37-2	Nitric Acid	7.529%
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· **Table of Nonhazardous Ingredients**

CAS: 7732-18-5	Water	92.4%
CAS: 7647-01-0	Hydrochloric Acid	0.049%
CAS: 7782-61-8	Ferric Nitrate	0.007%
CAS: 6156-78-1	Manganese Acetate Tetrahydrate	0.004%
CAS: 7631-99-4	Sodium Nitrate	0.004%
CAS: 19004-19-4	Cupric Nitrate Hydrate	0.004%
CAS: 10099-74-8	Lead Nitrate	0.002%
CAS: 7440-47-3	chromium	0.001%
CAS: 7440-66-6	Zinc Metal	0.001%

4 First-aid measures

· **Description of first aid measures**

· **General information:** Immediately remove any clothing soiled by the product.

· **After inhalation:** 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:** 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.

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- **Indication of any immediate medical attention and special treatment needed**
 No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **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.
- **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: 7697-37-2	Nitric Acid	0.16 ppm
CAS: 7647-01-0	Hydrochloric Acid	1.8 ppm
CAS: 7782-61-8	Ferric Nitrate	22 mg/m ³
CAS: 6156-78-1	Manganese Acetate Tetrahydrate	13 mg/m ³
CAS: 7631-99-4	Sodium Nitrate	3.8 mg/m ³
CAS: 19004-19-4	Cupric Nitrate Hydrate	42 mg/m ³
CAS: 10099-74-8	Lead Nitrate	0.24 mg/m ³
CAS: 7440-47-3	chromium	1.5 mg/m ³
CAS: 7440-66-6	Zinc Metal	6 mg/m ³

- **PAC-2:**

CAS: 7697-37-2	Nitric Acid	24 ppm
CAS: 7647-01-0	Hydrochloric Acid	22 ppm
CAS: 7782-61-8	Ferric Nitrate	110 mg/m ³
CAS: 6156-78-1	Manganese Acetate Tetrahydrate	22 mg/m ³
CAS: 7631-99-4	Sodium Nitrate	42 mg/m ³
CAS: 19004-19-4	Cupric Nitrate Hydrate	150 mg/m ³
CAS: 10099-74-8	Lead Nitrate	180 mg/m ³

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CAS: 7440-47-3	chromium	17 mg/m ³
CAS: 7440-66-6	Zinc Metal	40 mg/m ³
· PAC-3:		
CAS: 7697-37-2	Nitric Acid	92 ppm
CAS: 7647-01-0	Hydrochloric Acid	100 ppm
CAS: 7782-61-8	Ferric Nitrate	640 mg/m ³
CAS: 6156-78-1	Manganese Acetate Tetrahydrate	740 mg/m ³
CAS: 7631-99-4	Sodium Nitrate	250 mg/m ³
CAS: 19004-19-4	Cupric Nitrate Hydrate	240 mg/m ³
CAS: 10099-74-8	Lead Nitrate	1,100 mg/m ³
CAS: 7440-47-3	chromium	99 mg/m ³
CAS: 7440-66-6	Zinc Metal	240 mg/m ³

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
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.
- **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: 7697-37-2 Nitric Acid	
PEL	Long-term value: 5 mg/m ³ , 2 ppm
REL	Short-term value: 10 mg/m ³ , 4 ppm Long-term value: 5 mg/m ³ , 2 ppm
TLV	Short-term value: (4) NIC-0.025 ppm Long-term value: (2) ppm NIC-A4

- **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.

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Wash hands before breaks and at the end of work.

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

· **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:**



Tightly sealed goggles

· **Body protection:** Protective work clothing

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Liquid

Color: Clear

· **Odor:** Odorless

· **Odor threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: Undetermined.

· **Flash point:** Not applicable.

· **Flammability:** Not applicable.

· **Decomposition temperature:** Not determined.

· **Ignition temperature:** Product is not selfigniting.

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· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapor pressure:	Not determined.
· Density at 20 °C (68 °F):	1.02327 g/cm ³ (8.53919 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:	
Water:	92.4 %
VOC content:	0.00 %
	0.0 g/l / 0.00 lb/gal
Solids content:	0.0 %
· 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)

Inhalative	LC50/4h	39.8 mg/l
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- **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.

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- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Corrosive
Irritant
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.
- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

CAS: 10099-74-8	Lead Nitrate	2A
CAS: 7440-47-3	chromium	3

- **NTP (National Toxicology Program)**

CAS: 10099-74-8	Lead Nitrate	R
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- **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:**
Not hazardous for water.
Must not reach bodies of water or drainage ditch undiluted or unneutralized.
- **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** UN3264

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<ul style="list-style-type: none"> · UN proper shipping name · DOT · IMDG, IATA 	<p><i>Corrosive liquid, acidic, inorganic, n.o.s. (Nitric Acid)</i> CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Nitric Acid)</p>
<ul style="list-style-type: none"> · Transport hazard class(es) · DOT 	
	
<ul style="list-style-type: none"> · Class · Label 	<p>8 Corrosive substances 8</p>
<ul style="list-style-type: none"> · IMDG, IATA 	
	
<ul style="list-style-type: none"> · Class · Label 	<p>8 Corrosive substances 8</p>
<ul style="list-style-type: none"> · Packing group · DOT, IMDG, IATA 	<p>II</p>
<ul style="list-style-type: none"> · Environmental hazards: 	<p>Not applicable.</p>
<ul style="list-style-type: none"> · Special precautions for user · Hazard identification number (Kemler code): · EMS Number: · Segregation groups · Stowage Category · Stowage Code · Segregation Code 	<p>Warning: Corrosive substances 80 F-A,S-B (SGG1) Acids B SW2 Clear of living quarters. SG36 Stow "separated from" SGG18-alkalis. SG49 Stow "separated from" SGG6-cyanides</p>
<ul style="list-style-type: none"> · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code 	<p>Not applicable.</p>
<ul style="list-style-type: none"> · Transport/Additional information: · DOT · Quantity limitations 	<p>On passenger aircraft/rail: 1 L On cargo aircraft only: 30 L</p>
<ul style="list-style-type: none"> · IMDG · Limited quantities (LQ) · Excepted quantities (EQ) 	<p>1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml</p>
<ul style="list-style-type: none"> · UN "Model Regulation": 	<p>UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID), 8, II</p>

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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: 7697-37-2	Nitric Acid
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· **Section 313 (Specific toxic chemical listings):**

CAS: 7697-37-2	Nitric Acid
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CAS: 7782-61-8	Ferric Nitrate
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CAS: 10099-74-8	Lead Nitrate
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CAS: 7440-47-3	chromium
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CAS: 7440-66-6	Zinc Metal
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· **TSCA (Toxic Substances Control Act):**

Water	ACTIVE
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Nitric Acid	ACTIVE
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Hydrochloric Acid	ACTIVE
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Sodium Nitrate	ACTIVE
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Lead Nitrate	ACTIVE
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chromium	ACTIVE
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Zinc Metal	ACTIVE
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· **Hazardous Air Pollutants**

CAS: 7647-01-0	Hydrochloric Acid
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CAS: 10099-74-8	Lead Nitrate
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· **Proposition 65**

· **Chemicals known to cause cancer:**

CAS: 10099-74-8	Lead Nitrate
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· **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: 10099-74-8	Lead Nitrate	B2
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CAS: 7440-47-3	chromium	D
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CAS: 7440-66-6	Zinc Metal	D, I, II
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· **TLV (Threshold Limit Value)**

CAS: 10099-74-8	Lead Nitrate	A3
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CAS: 7440-47-3	chromium	A4
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· **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).
- **Hazard pictograms**



GHS05

- **Signal word** *Danger*
- **Hazard-determining components of labeling:**
Nitric Acid
- **Hazard statements**
Causes severe skin burns and eye damage.
- **Precautionary statements**
Do not breathe dusts or mists.
Wash thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
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.
Specific treatment (see on this label).
Wash contaminated clothing before reuse.
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:
- **Date of preparation / last revision**
Revision 0.0, 02-21-2025: Creation date for SDS CMC/STN
02/21/2025 / -
- **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

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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
Skin Corrosion 1A: Skin corrosion/irritation – Category 1A
Eye Damage 1: Serious eye damage/eye irritation – Category 1

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