

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/07/2019

Reviewed on 05/07/2019

1 Identification

- **Product identifier**
- **Trade name:** Color Reagent (Contains Ferrozine, Sodium Acetate and Acetic Acid) Helium Purged
- **Article number:** OLI008A
- **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 sherman@aquasolutions.org
- **Emergency telephone number:**
Chemtrec: 800-424-9300
Canutec: 613-996-6666



2 Hazard(s) identification

- **Classification of the substance or mixture**
The product is not classified, according to the Globally Harmonized System (GHS).
- **Label elements**
- **GHS label elements** Not Applicable
- **Hazard pictograms** Not Applicable
- **Signal word** Not Applicable
- **Hazard statements** Not Applicable
- **Precautionary statements**
If swallowed: Call a poison center/doctor if you feel unwell.
If on skin: Wash with plenty of water.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**

	Health = 0
	Fire = 0
	Reactivity = 0
- **HMIS-ratings (scale 0 - 4)**

<table border="1" style="display: inline-table;"><tr><td style="background-color: #0000FF; color: white; padding: 2px;">HEALTH</td><td style="width: 20px; text-align: center;">0</td></tr></table>	HEALTH	0	Health = 0
HEALTH	0		
<table border="1" style="display: inline-table;"><tr><td style="background-color: #FF0000; color: white; padding: 2px;">FIRE</td><td style="width: 20px; text-align: center;">0</td></tr></table>	FIRE	0	Fire = 0
FIRE	0		
<table border="1" style="display: inline-table;"><tr><td style="background-color: #FFFF00; padding: 2px;">REACTIVITY</td><td style="width: 20px; text-align: center;">0</td></tr></table>	REACTIVITY	0	Reactivity = 0
REACTIVITY	0		
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

US

(Contd. on page 2)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/07/2019

Reviewed on 05/07/2019

**Trade name: Color Reagent (Contains Ferrozine,
Sodium Acetate and Acetic Acid) Helium Purged**

(Contd. of page 1)

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description: Mixture of the substances listed below with nonhazardous additions.**

- **Dangerous components:**

CAS: 64-19-7	Acetic Acid	4.487%
--------------	-------------	--------

- **Table of Nonhazardous Ingredients**

CAS: 6131-90-4	Sodium Acetate Trihydrate	46.875%
CAS: 28048-33-1	Ferrozine Disodium 4,4'-[3-(Pyridin-2-yl)-1,2,4-Triazine-5,6-Diyl]bis(Benzenesulphonate)	0.107%
CAS: 7732-18-5	Water	48.532%

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: Immediately rinse with water.**
- **After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.**
- **After swallowing: If symptoms persist consult 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: Use fire fighting measures that suit the environment.**
- **Special hazards arising from the substance or mixture No further relevant information available.**
- **Advice for firefighters**
- **Protective equipment: No special measures required.**

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures Not required.**
- **Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
- **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.

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/07/2019

Reviewed on 05/07/2019

**Trade name: Color Reagent (Contains Ferrozine,
Sodium Acetate and Acetic Acid) Helium Purged**

(Contd. of page 2)

· Protective Action Criteria for Chemicals

· PAC-1:		
CAS: 6131-90-4	Sodium Acetate Trihydrate	11 mg/m ³
CAS: 64-19-7	Acetic Acid	5 ppm
· PAC-2:		
CAS: 6131-90-4	Sodium Acetate Trihydrate	120 mg/m ³
CAS: 64-19-7	Acetic Acid	35 ppm
· PAC-3:		
CAS: 6131-90-4	Sodium Acetate Trihydrate	690 mg/m ³
CAS: 64-19-7	Acetic Acid	250 ppm

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:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **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 item 7.
- **Control parameters**

· Components with limit values that require monitoring at the workplace:	
CAS: 64-19-7 Acetic Acid	
PEL	Long-term value: 25 mg/m ³ , 10 ppm
REL	Short-term value: 37 mg/m ³ , 15 ppm Long-term value: 25 mg/m ³ , 10 ppm
TLV	Short-term value: 37 mg/m ³ , 15 ppm Long-term value: 25 mg/m ³ , 10 ppm

- **Additional information:** The lists that were valid during the creation 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:**



Protective gloves

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/07/2019

Reviewed on 05/07/2019

**Trade name: Color Reagent (Contains Ferrozine,
Sodium Acetate and Acetic Acid) Helium Purged**

(Contd. of page 3)

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:** Goggles recommended during refilling.

· **Body protection:** Protective work clothing

9 Physical and chemical properties

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

· **General Information**

· **Appearance:**

Form: Liquid

Color: Yellow

· **Odor:** Vinegar

· **Odor threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Melting point/Melting range: Undetermined.

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

· **Flash point:** Not applicable.

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

· **Ignition temperature:** 600 °C (1,112 °F)

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

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

· **Explosion limits:**

Lower: Not determined.

Upper: Not determined.

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

· **Density at 20 °C (68 °F):** 1.21331 g/cm³ (10.12507 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.

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/07/2019

Reviewed on 05/07/2019

**Trade name: Color Reagent (Contains Ferrozine,
Sodium Acetate and Acetic Acid) Helium Purged**

(Contd. of page 4)

- | | |
|----------------------------|--|
| · Viscosity: | |
| Dynamic: | Not determined. |
| Kinematic: | Not determined. |
| · Solvent content: | |
| Organic solvents: | 4.5 % |
| Water: | 48.5 % |
| VOC content: | 4.49 % |
| | 54.4 g/l / 0.45 lb/gal |
| Solids content: | 47.0 % |
| · 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)

Oral	LD50	6,780 mg/kg (rat)
Dermal	LD50	23,623 mg/kg (rabbit)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **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 is listed.

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/07/2019

Reviewed on 05/07/2019

**Trade name: Color Reagent (Contains Ferrozine,
Sodium Acetate and Acetic Acid) Helium Purged**

(Contd. of page 5)

· **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:**
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **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:** Smaller quantities can be disposed of with household waste.
- **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, ADN, IMDG, IATA | Not regulated |
| · UN proper shipping name | |
| · DOT, ADN, IATA | Not regulated |
| · IMDG | Not Regulated
Not regulated |
| · Transport hazard class(es) | |
| · DOT, ADN, IMDG, IATA | |
| · Class | Not regulated |
| · Packing group | |
| · DOT, IMDG, IATA | Not regulated |
| · Environmental hazards: | Not applicable. |
| · Special precautions for user | Not applicable. |

(Contd. on page 7)

US

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/07/2019

Reviewed on 05/07/2019

**Trade name: Color Reagent (Contains Ferrozine,
Sodium Acetate and Acetic Acid) Helium Purged**

(Contd. of page 6)

- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** *Not applicable.*
- **UN "Model Regulation":** *Not regulated*

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**

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

None of the ingredients is listed.

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

None of the ingredients is listed.

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

Acetic Acid

ACTIVE

Ferrozine

ACTIVE

Disodium 4,4'-[3-(Pyridin-2-yl)-1,2,4-Triazine-5,6-Diyl]bis(Benzenesulphonate)

Water

ACTIVE

· **Hazardous Air Pollutants**

None of the ingredients is listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **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)**

None of the ingredients is listed.

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

None of the ingredients is listed.

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

None of the ingredients is listed.

· **GHS label elements** *Not Applicable*

· **Hazard pictograms** *Not Applicable*

· **Signal word** *Not Applicable*

· **Hazard statements** *Not Applicable*

· **Precautionary statements**

If swallowed: Call a poison center/doctor if you feel unwell.

If on skin: Wash with plenty of water.

(Contd. on page 8)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/07/2019

Reviewed on 05/07/2019

**Trade name: Color Reagent (Contains Ferrozine,
Sodium Acetate and Acetic Acid) Helium Purged**

(Contd. of page 7)

*If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.*

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**

Revision 1.0 04-26-2019 Revised product description from 5 Normal to 13% Sulfuric Acid. STN

Revision 0.1, 06-11-2018 updated density results based on spreadsheet. STN

05/07/2019 / -

· **Abbreviations and acronyms:**

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

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

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