

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/19/2023

Reviewed on 05/19/2023

## 1 Identification

- **Product identifier**
- **Trade name:** Working Color Reagent
- **Article number:** VUL439
- **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  
Technical Coordinator  
Sherman Nelson shermann@aquasolutions.org
- **Emergency telephone number:**  
Chemtec: 800-424-9300  
Canutec: 613-996-6666



## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flammable Liquids 2

H225 Highly flammable liquid and vapor.



GHS08 Health hazard

Specific Target Organ Toxicity - Single Exposure 2 H371 May cause damage to the central nervous system and the visual organs.



GHS07

Acute Toxicity - Oral 4

H302 Harmful if swallowed.

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



GHS02



GHS07



GHS08

- **Signal word** *Danger*
- **Hazard-determining components of labeling:**  
*Methanol*

(Contd. on page 2)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/19/2023

Reviewed on 05/19/2023

Trade name: Working Color Reagent

(Contd. of page 1)

- **Hazard statements**

Highly flammable liquid and vapor.

Harmful if swallowed.

May cause damage to the central nervous system and the visual organs.

- **Precautionary statements**

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Keep container tightly closed.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting/equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Do not breathe dust/fume/gas/mist/vapors/spray.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Wear protective gloves/protective clothing/eye protection/face protection.

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

Rinse mouth.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF exposed or concerned: Call a poison center/doctor.

In case of fire: Use CO<sub>2</sub>, powder or water spray to extinguish.

Store in a well-ventilated place. Keep cool.

Store locked up.

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

- **Classification system:**

- **NFPA ratings (scale 0 - 4)**



Health = 1

Fire = 3

Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



Health = \*1

Fire = 3

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: 67-56-1	Methanol	9.077%
CAS: 7782-61-8	Ferric Nitrate	2.317%
CAS: 7697-37-2	Nitric Acid	0.361%

- **Table of Nonhazardous Ingredients**

CAS: 7732-18-5	Water	88.197%
----------------	-------	---------

(Contd. on page 3)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/19/2023

Reviewed on 05/19/2023

Trade name: Working Color Reagent

(Contd. of page 2)

CAS: 592-85-8 Mercuric Thiocyanate

0.048%

## 4 First-aid measures

- **Description of first aid measures**
- **General information:**  
Immediately remove any clothing soiled by the product.  
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **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.
- **After swallowing:** Immediately call a 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:**  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **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.  
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 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: 67-56-1	Methanol	530 ppm
CAS: 7782-61-8	Ferric Nitrate	22 mg/m <sup>3</sup>
CAS: 7697-37-2	Nitric Acid	0.16 ppm

(Contd. on page 4)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/19/2023

Reviewed on 05/19/2023

**Trade name: Working Color Reagent**

(Contd. of page 3)

CAS: 592-85-8	Mercuric Thiocyanate	0.12 mg/m <sup>3</sup>
<b>· PAC-2:</b>		
CAS: 67-56-1	Methanol	2,100 ppm
CAS: 7782-61-8	Ferric Nitrate	110 mg/m <sup>3</sup>
CAS: 7697-37-2	Nitric Acid	24 ppm
CAS: 592-85-8	Mercuric Thiocyanate	0.16 mg/m <sup>3</sup>
<b>· PAC-3:</b>		
CAS: 67-56-1	Methanol	7200* ppm
CAS: 7782-61-8	Ferric Nitrate	640 mg/m <sup>3</sup>
CAS: 7697-37-2	Nitric Acid	92 ppm
CAS: 592-85-8	Mercuric Thiocyanate	44 mg/m <sup>3</sup>

## 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 ignition sources away - Do not smoke.  
Protect against electrostatic charges.  
Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**  
Keep receptacle tightly sealed.  
Store in cool, dry conditions in well sealed receptacles.
- **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:**  
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.  
At this time, the remaining constituent has no known exposure limits.

### CAS: 67-56-1 Methanol

PEL	Long-term value: 260 mg/m <sup>3</sup> , 200 ppm
REL	Short-term value: 325 mg/m <sup>3</sup> , 250 ppm Long-term value: 260 mg/m <sup>3</sup> , 200 ppm Skin
TLV	Short-term value: 250 ppm Long-term value: 200 ppm Skin; BEI

(Contd. on page 5)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/19/2023

Reviewed on 05/19/2023

**Trade name: Working Color Reagent**

(Contd. of page 4)

**CAS: 7697-37-2 Nitric Acid**

PEL	Long-term value: 5 mg/m <sup>3</sup> , 2 ppm
REL	Short-term value: 10 mg/m <sup>3</sup> , 4 ppm Long-term value: 5 mg/m <sup>3</sup> , 2 ppm
TLV	Short-term value: (4) NIC-0.025* ppm Long-term value: (2) ppm *inh. fraction + vapor

**· Ingredients with biological limit values:**

**CAS: 67-56-1 Methanol**

BEI	15 mg/L
	LD50 Intraperitoneal: urine
	Time: end of shift
	LD50: Methanol (background, nonspecific)

**· 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.

Wash hands before breaks and at the end of work.

**· 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

US

(Contd. on page 6)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/19/2023

Reviewed on 05/19/2023

Trade name: Working Color Reagent

(Contd. of page 5)

## 9 Physical and chemical properties

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

- **General Information**

- **Appearance:**

<b>Form:</b>	Liquid
<b>Color:</b>	Brown
<b>Odor:</b>	de l'alcool

- **Odor threshold:** l  
Not determined.

- **pH-value:** Not determined.

- **Change in condition**

<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	64 °C (147.2 °F)

- **Flash point:** 11 °C (51.8 °F)

- **Flammability (solid, gaseous):** Highly flammable.

- **Auto igniting:** 455 °C (851 °F)

- **Decomposition temperature:** Not determined.

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

- **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

- **Explosion limits:**

<b>Lower:</b>	5.5 Vol %
<b>Upper:</b>	44 Vol %

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

- **Density at 20 °C (68 °F):** 0.99803 g/cm<sup>3</sup> (8.32856 lbs/gal)

- **Relative density** Not determined.

- **Vapor density** Not determined.

- **Evaporation rate** Not determined.

- **Solubility in / Miscibility with**

<b>Water:</b>	Fully miscible.
---------------	-----------------

- **Partition coefficient (n-octanol/water):** Not determined.

- **Viscosity:**

<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.

- **Solvent content:**

<b>Organic solvents:</b>	9.1 %
<b>Water:</b>	88.2 %
<b>VOC content:</b>	9.08 %
	90.6 g/l / 0.76 lb/gal

- **Solids content:** 3.2 %

(Contd. on page 7)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/19/2023

Reviewed on 05/19/2023

**Trade name: Working Color Reagent**

(Contd. of page 6)

· **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	1,102 mg/kg
Dermal	LD50	3,305 mg/kg
Inhalative	LC50/4h	31.8 mg/l

· **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 shows the following dangers according to internally approved calculation methods for preparations:  
Harmful

· **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.

· **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.

(Contd. on page 8)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/19/2023

Reviewed on 05/19/2023

Trade name: Working Color Reagent



(Contd. of page 7)

- **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:**  
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

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>· <b>UN-Number</b></li> <li>· <b>DOT, IMDG, IATA</b></li> </ul>                                | UN1992  |
| <ul style="list-style-type: none"> <li>· <b>UN proper shipping name</b></li> <li>· <b>DOT</b></li> <li>· <b>IMDG, IATA</b></li> </ul> | Flammable liquids, toxic, n.o.s. (Methanol, Mercuric Thiocyanate)<br>FLAMMABLE LIQUID, TOXIC, N.O.S. (Methanol, Mercuric Thiocyanate) |
| <ul style="list-style-type: none"> <li>· <b>Transport hazard class(es)</b></li> <li>· <b>DOT</b></li> </ul>                           |    |
| <ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>  | 3 Flammable liquids<br>3, 6.1   |
| <ul style="list-style-type: none"> <li>· <b>IMDG</b></li> </ul>   |    |
| <ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>  | 3 Flammable liquids<br>3/6.1  |

(Contd. on page 9)

US



# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/19/2023

Reviewed on 05/19/2023

Trade name: Working Color Reagent

(Contd. of page 8)

## · IATA



· Class 3 Flammable liquids  
 · Label 3 (6.1)

· Packing group II  
 · DOT, IMDG, IATA

· Environmental hazards:  
 · Marine pollutant: No

· Special precautions for user Warning: Flammable liquids  
 · Hazard identification number (Kemler code): 336  
 · EMS Number: F-E,S-D  
 · Stowage Category B  
 · Stowage Code SW2 Clear of living quarters.

· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.

## · Transport/Additional information:

· DOT  
 · Quantity limitations On passenger aircraft/rail: 1 L  
 On cargo aircraft only: 60 L

## · IMDG

· Limited quantities (LQ) 1L  
 · Excepted quantities (EQ) Code: E2  
 Maximum net quantity per inner packaging: 30 ml  
 Maximum net quantity per outer packaging: 500 ml

· UN "Model Regulation": UN 1992 FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL, MERCURIC THIOCYANATE), 3 (6.1), II

## 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
----------------	-------------

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

CAS: 67-56-1	Methanol
--------------	----------

CAS: 7782-61-8	Ferric Nitrate
----------------	----------------

CAS: 7697-37-2	Nitric Acid
----------------	-------------

CAS: 592-85-8	Mercuric Thiocyanate
---------------	----------------------

## · TSCA (Toxic Substances Control Act):

Water	ACTIVE
-------	--------

(Contd. on page 10)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/19/2023

Reviewed on 05/19/2023

**Trade name: Working Color Reagent**

(Contd. of page 9)

Methanol	ACTIVE
Nitric Acid	ACTIVE
Mercuric Thiocyanate	ACTIVE

· **Hazardous Air Pollutants**

CAS: 67-56-1	Methanol
CAS: 592-85-8	Mercuric Thiocyanate

· **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:**

CAS: 67-56-1	Methanol
CAS: 592-85-8	Mercuric Thiocyanate

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value)**

None of the ingredients is listed.

· **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**



GHS02    GHS07    GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**

Methanol

· **Hazard statements**

Highly flammable liquid and vapor.

Harmful if swallowed.

May cause damage to the central nervous system and the visual organs.

· **Precautionary statements**

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Keep container tightly closed.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting/equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Do not breathe dust/fume/gas/mist/vapors/spray.

Wash thoroughly after handling.

(Contd. on page 11)

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 05/19/2023

Reviewed on 05/19/2023

**Trade name: Working Color Reagent**

(Contd. of page 10)

Do not eat, drink or smoke when using this product.  
 Wear protective gloves/protective clothing/eye protection/face protection.  
 If swallowed: Call a poison center/doctor if you feel unwell.  
 Rinse mouth.  
 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
 IF exposed or concerned: Call a poison center/doctor.  
 In case of fire: Use CO<sub>2</sub>, powder or water spray to extinguish.  
 Store in a well-ventilated place. Keep cool.  
 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**

Revision 1.0 05/19/2023, reviewed SDS for accuracy. S.T.N.

Revision 1.0 01-10-2022, removed fluoride and sulfate from ingredients. STN

Revision 1.0, 03-03-2020: updated description and formulation to 14% from 26%. STN  
 05/19/2023

- **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

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

BEI: Biological Exposure Limit

Flammable Liquids 2: Flammable liquids – Category 2

Acute Toxicity - Oral 4: Acute toxicity – Category 4

Specific Target Organ Toxicity - Single Exposure 2: Specific target organ toxicity (single exposure) – Category 2

- **\* Data compared to the previous version altered.**