

# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/10/2024

Reviewed on 06/10/2024

## 1 Identification

- **Product identifier**
- **Trade name:** Combined Color Reagent  
APHA - EPA
- **Article number:** 2169
- **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](mailto:shermann@aquasolutions.org)  
Technical Coordinator  
Sherman Nelson [shermann@aquasolutions.org](mailto:shermann@aquasolutions.org)
- **Emergency telephone number:**  
Chemtrec: 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 1 H370 Causes 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)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/10/2024

Reviewed on 06/10/2024

**Trade name: Combined Color Reagent**  
**APHA - EPA**

(Contd. of page 1)

- **Hazard statements**

*Highly flammable liquid and vapor.*

*Harmful if swallowed.*

*Causes 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.*

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

*IF exposed: Call a POISON CENTER or doctor/physician.*

*Specific treatment (see on this label).*

*Rinse mouth.*

*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 = 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: 67-56-1	Methanol	12.103%
CAS: 7782-61-8	Ferric Nitrate	3.089%
CAS: 7697-37-2	Nitric Acid	0.482%

(Contd. on page 3)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/10/2024

Reviewed on 06/10/2024

**Trade name: Combined Color Reagent**  
**APHA - EPA**

(Contd. of page 2)

### · Table of Nonhazardous Ingredients

CAS: 7732-18-5	Water	84.263%
CAS: 592-85-8	Mercuric Thiocyanate	0.064%

## 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.

(Contd. on page 4)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/10/2024

Reviewed on 06/10/2024

**Trade name: Combined Color Reagent**  
**APHA - EPA**

(Contd. of page 3)

### · 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
CAS: 592-85-8	Mercuric Thiocyanate	0.12 mg/m <sup>3</sup>
· PAC-2:		
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>
· PAC-3:		
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.

(Contd. on page 5)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/10/2024

Reviewed on 06/10/2024

**Trade name: Combined Color Reagent**  
**APHA - EPA**

(Contd. of page 4)

**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; BEIc

**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  
NIC-A4

· **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.

(Contd. on page 6)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/10/2024

Reviewed on 06/10/2024

**Trade name: Combined Color Reagent**  
**APHA - EPA**

(Contd. of page 5)

· **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:**

<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):** 128 hPa (96 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**· **Water:** Fully miscible.· **Partition coefficient (n-octanol/water):** Not determined.· **Viscosity:**· **Dynamic:** Not determined.

(Contd. on page 7)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/10/2024

Reviewed on 06/10/2024

**Trade name: Combined Color Reagent**  
**APHA - EPA**

(Contd. of page 6)

<b>Kinematic:</b>	Not determined.
<b>· Solvent content:</b>	
<b>Organic solvents:</b>	12.1 %
<b>Water:</b>	84.3 %
<b>VOC content:</b>	12.10 %
	120.8 g/l / 1.01 lb/gal
<b>Solids content:</b>	3.2 %
<b>· Other information</b>	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	826 mg/kg
Dermal	LD50	2,479 mg/kg
Inhalative	LC50/4h	23.8 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.

(Contd. on page 8)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/10/2024

Reviewed on 06/10/2024

**Trade name: Combined Color Reagent**  
**APHA - EPA**

(Contd. of page 7)

## 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:**  
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** UN1992
- **UN proper shipping name**
- **DOT** Flammable liquids, toxic, n.o.s. (Methanol, Mercuric Thiocyanate)
- **IMDG, IATA** FLAMMABLE LIQUID, TOXIC, N.O.S. (Methanol, Mercuric Thiocyanate)
- **Transport hazard class(es)**
- **DOT**
- 
- **Class** 3 Flammable liquids

(Contd. on page 9)

US



# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/10/2024

Reviewed on 06/10/2024

**Trade name: Combined Color Reagent**  
**APHA - EPA**

(Contd. of page 8)

· **Label** 3, 6.1

· **IMDG**



· **Class** 3 Flammable liquids  
· **Label** 3/6.1

· **IATA**



· **Class** 3 Flammable liquids  
· **Label** 3 (6.1)

· **Packing group**  
· **DOT, IMDG, IATA** II

· **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.

(Contd. on page 10)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/10/2024

Reviewed on 06/10/2024

**Trade name: Combined Color Reagent**  
**APHA - EPA**

(Contd. of page 9)

· **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

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

(Contd. on page 11)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/10/2024

Reviewed on 06/10/2024

**Trade name: Combined Color Reagent**  
**APHA - EPA**

(Contd. of page 10)

- **Hazard statements**

*Highly flammable liquid and vapor.*

*Harmful if swallowed.*

*Causes 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.*

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

*IF exposed: Call a POISON CENTER or doctor/physician.*

*Specific treatment (see on this label).*

*Rinse mouth.*

*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:*

- **Date of preparation / last revision**

*Revision 1.2, 06/10/2024: Reviewed SDS for accuracy. MH/STN*

*Revision 0.0 Creation date for SDS 11-6-2020. STN*

*06/10/2024 / 1.1*

- **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*

(Contd. on page 12)

**Safety Data Sheet**  
**acc. to OSHA HCS**

Printing date 06/10/2024

Reviewed on 06/10/2024

**Trade name: Combined Color Reagent**  
**APHA - EPA**

(Contd. of page 11)

*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 1: Specific target organ toxicity (single exposure) – Category 1***\* Data compared to the previous version altered.**

US