

# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/14/2024

Reviewed on 06/14/2024

## 1 Identification

- **Product identifier**
- **Trade name:** Dichlorofluorescein TS  
Prepared to USP
- **Article number:** SPX476
- **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)
- **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 1 H224 Extremely flammable liquid and vapor.

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



GHS02

- **Signal word** *Danger*
- **Hazard statements**  
*Extremely flammable liquid and vapor.*
- **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.*  
*Wear protective gloves/protective clothing/eye protection/face protection.*  
*If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.*  
*In case of fire: Use CO2, powder or water spray to extinguish.*  
*Store in a well-ventilated place. Keep cool.*  
*Dispose of contents/container in accordance with local/regional/national/international regulations.*

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**Trade name: Dichlorofluorescein TS**  
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- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



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



- **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: 64-17-5	Ethyl Alcohol, Absolute 200 Proof	48.804%
CAS: 67-56-1	Methanol	2.711%
CAS: 67-63-0	Isopropanol	2.711%

- **Table of Nonhazardous Ingredients**

CAS: 7732-18-5	Water	45.647%
CAS: 76-54-0	2-(2,7-dichloro-6-hydroxy-3-oxo-3H-xanthen-9-yl)benzoic acid	0.115%
CAS: 1310-73-2	Sodium Hydroxide	0.011%

### 4 First-aid measures

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **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:** 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:**  
 CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

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- **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**  
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: 64-17-5	Ethyl Alcohol, Absolute 200 Proof	1,800 ppm
CAS: 67-56-1	Methanol	530 ppm
CAS: 67-63-0	Isopropanol	400 ppm
CAS: 1310-73-2	Sodium Hydroxide	0.5 mg/m <sup>3</sup>

- **PAC-2:**

CAS: 64-17-5	Ethyl Alcohol, Absolute 200 Proof	3300* ppm
CAS: 67-56-1	Methanol	2,100 ppm
CAS: 67-63-0	Isopropanol	2000* ppm
CAS: 1310-73-2	Sodium Hydroxide	5 mg/m <sup>3</sup>

- **PAC-3:**

CAS: 64-17-5	Ethyl Alcohol, Absolute 200 Proof	15000* ppm
CAS: 67-56-1	Methanol	7200* ppm
CAS: 67-63-0	Isopropanol	12000** ppm
CAS: 1310-73-2	Sodium Hydroxide	50 mg/m <sup>3</sup>

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling** Open and handle receptacle with care.
- **Information about protection against explosions and fires:**  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.
- **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.

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- **Further information about storage conditions:**  
 Keep receptacle tightly sealed.  
 Do not gas tight seal receptacle.  
 Store in cool, dry conditions in well sealed receptacles.  
 Protect from heat and direct sunlight.
- **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: 64-17-5 Ethyl Alcohol, Absolute 200 Proof

PEL	Long-term value: 1900 mg/m <sup>3</sup> , 1000 ppm
REL	Long-term value: 1900 mg/m <sup>3</sup> , 1000 ppm
TLV	Short-term value: 1000 ppm
	A3

### 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: 67-63-0 Isopropanol

PEL	Long-term value: 980 mg/m <sup>3</sup> , 400 ppm
REL	Short-term value: 1225 mg/m <sup>3</sup> , 500 ppm
	Long-term value: 980 mg/m <sup>3</sup> , 400 ppm
TLV	Short-term value: 400 ppm
	Long-term value: 200 ppm
	BEI, 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)

### CAS: 67-63-0 Isopropanol

BEI	40 mg/L
	LD50 Intraperitoneal: urine
	Time: end of shift at end of workweek
	LD50: Acetone (background, nonspecific)

- **Additional information:** The lists that were valid during the creation were used as basis.

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- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
*Immediately remove all soiled and contaminated clothing.*  
*Wash hands before breaks and at the end of work.*
- **Breathing equipment:** *Use suitable respiratory protective device in case of insufficient ventilation.*
- **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:**

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

<b>Odor threshold:</b>	l Not determined.
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<b>pH-value:</b>	Not determined.
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- **Change in condition**

<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	<35 °C (<95 °F)

<b>Flash point:</b>	11 °C (51.8 °F)
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· <b>Flammability (solid, gaseous):</b>	Not applicable.
· <b>Auto igniting:</b>	425 °C (797 °F)
· <b>Decomposition temperature:</b>	Not determined.
· <b>Ignition temperature:</b>	Product is not selfigniting.
· <b>Danger of explosion:</b>	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· <b>Explosion limits:</b>	
<b>Lower:</b>	3.5 Vol %
<b>Upper:</b>	19 Vol %
· <b>Vapor pressure at 20 °C (68 °F):</b>	59 hPa (44.3 mm Hg)
· <b>Density at 20 °C (68 °F):</b>	0.88552 g/cm <sup>3</sup> (7.38966 lbs/gal)
· <b>Relative density</b>	Not determined.
· <b>Vapor density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with Water:</b>	Fully miscible.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	54.2 %
<b>Water:</b>	45.6 %
<b>VOC content:</b>	54.23 %
	480.2 g/l / 4.01 lb/gal
<b>Solids content:</b>	48.8 %
· <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.

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## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

### ATE (Acute Toxicity Estimate)

Oral	LD50	3,688 mg/kg
Dermal	LD50	11,065 mg/kg
Inhalative	LC50/4h	111 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:**

- **Carcinogenic categories**

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

CAS: 64-17-5	Ethyl Alcohol, Absolute 200 Proof	1
CAS: 67-63-0	Isopropanol	3

- **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.
- **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.**

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- **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>	<p style="text-align: right;">UN1993</p>
<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>	<p style="text-align: right;">Flammable liquids, n.o.s. (Ethanol, Methanol, Isopropanol )</p> <p style="text-align: right;">FLAMMABLE LIQUID, N.O.S. (Ethanol, Methanol, Isopropanol )</p>
<ul style="list-style-type: none"> <li>· <b>Transport hazard class(es)</b></li> <li>· <b>DOT</b></li> </ul>	<div style="text-align: center;">  <p>3</p> </div>
<ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>	<p style="text-align: right;">3 Flammable liquids</p> <p style="text-align: right;">3</p>
<ul style="list-style-type: none"> <li>· <b>IMDG, IATA</b></li> </ul>	<div style="text-align: center;">  <p>3</p> </div>
<ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>	<p style="text-align: right;">3 Flammable liquids</p> <p style="text-align: right;">3</p>
<ul style="list-style-type: none"> <li>· <b>Packing group</b></li> <li>· <b>DOT, IMDG, IATA</b></li> </ul>	<p style="text-align: right;">II</p>
<ul style="list-style-type: none"> <li>· <b>Environmental hazards:</b></li> </ul>	<p style="text-align: right;">Not applicable.</p>
<ul style="list-style-type: none"> <li>· <b>Special precautions for user</b></li> <li>· <b>Hazard identification number (Kemler code):</b></li> <li>· <b>EMS Number:</b></li> <li>· <b>Stowage Category</b></li> </ul>	<p style="text-align: right;">Warning: Flammable liquids</p> <p style="text-align: right;">33</p> <p style="text-align: right;">F-E, S-E</p> <p style="text-align: right;">E</p>
<ul style="list-style-type: none"> <li>· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b></li> </ul>	<p style="text-align: right;">Not applicable.</p>
<ul style="list-style-type: none"> <li>· <b>Transport/Additional information:</b></li> <li>· <b>DOT</b></li> <li>· <b>Quantity limitations</b></li> </ul>	<p style="text-align: right;">On passenger aircraft/rail: 1 L</p> <p style="text-align: right;">On cargo aircraft only: 30 L</p>

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· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	0
· <b>Excepted quantities (EQ)</b>	Code: E3
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 300 ml
· <b>UN "Model Regulation":</b>	UN 1993 FLAMMABLE LIQUID, N.O.S. (ETHANOL, METHANOL, ISOPROPANOL), 3, 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):**

None of the ingredients is listed.

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

CAS: 67-56-1 | Methanol

CAS: 67-63-0 | Isopropanol

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

Ethyl Alcohol, Absolute 200 Proof	ACTIVE
Water	ACTIVE
Methanol	ACTIVE
Isopropanol	ACTIVE
2-(2,7-dichloro-6-hydroxy-3-oxo-3H-xanthen-9-yl)benzoic acid	ACTIVE
Sodium Hydroxide	ACTIVE

· **Hazardous Air Pollutants**

CAS: 67-56-1 | Methanol

· **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: 64-17-5 | Ethyl Alcohol, Absolute 200 Proof

CAS: 67-56-1 | Methanol

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

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· **TLV (Threshold Limit Value)**

CAS: 64-17-5	Ethyl Alcohol, Absolute 200 Proof	A3
CAS: 67-63-0	Isopropanol	A4

· **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

· **Signal word** Danger

· **Hazard statements**

Extremely flammable liquid and vapor.

· **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.

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

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

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

Store in a well-ventilated place. Keep cool.

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 0.1, 06/14/2024: Reviewed SDS for accuracy. MH/STN

Revision 0.0, 05-29-2024: Creation date for SDS. STN

06/14/2024 / 1.0

· **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

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*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 1: Flammable liquids – Category 1*  
· **\* Data compared to the previous version altered.**

US