

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixtures  
Product name : Dichlorofluorescein, 0.1% Alcoholic  
Product code : LC13580

#### 1.2. Recommended use and restrictions on use

Use of the substance/mixture : For laboratory and manufacturing use only.  
Recommended use : Laboratory chemicals  
Restrictions on use : Not for food, drug or household use

#### 1.3. Supplier

LabChem Inc  
Jackson's Pointe Commerce Park Building 1000, 1010 Jackson's Pointe Court  
Zelienople, PA 16063 - USA  
T 412-826-5230 - F 724-473-0647  
[info@labchem.com](mailto:info@labchem.com) - [www.labchem.com](http://www.labchem.com)

#### 1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 or 011-703-527-3887

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS-US classification

|                            |      |                                                                      |
|----------------------------|------|----------------------------------------------------------------------|
| Flammable liquids          | H226 | Flammable liquid and vapor                                           |
| Category 3                 |      |                                                                      |
| Carcinogenicity Category   | H350 | May cause cancer                                                     |
| 1A                         |      |                                                                      |
| Reproductive toxicity      | H361 | Suspected of damaging fertility or the unborn child                  |
| Category 2                 |      |                                                                      |
| Specific target organ      | H370 | Causes damage to organs (central nervous system, optic nerve) (oral) |
| toxicity (single exposure) |      |                                                                      |
| Category 1                 |      |                                                                      |

Full text of H statements : see section 16

#### 2.2. GHS Label elements, including precautionary statements

##### GHS-US labeling

Hazard pictograms (GHS-US) :



GHS02

GHS08

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : H226 - Flammable liquid and vapor  
H350 - May cause cancer  
H361 - Suspected of damaging fertility or the unborn child  
H370 - Causes damage to organs (central nervous system, optic nerve) (oral)

Precautionary statements (GHS-US) : P201 - Obtain special instructions before use  
P202 - Do not handle until all safety precautions have been read and understood  
P210 - Keep away from heat, sparks, open flames, hot surfaces. - No smoking  
P233 - Keep container tightly closed  
P240 - Ground/bond container and receiving equipment  
P241 - Use explosion-proof electrical, ventilating, lighting equipment  
P242 - Use only non-sparking tools  
P243 - Take precautionary measures against static discharge  
P260 - Do not breathe mist, vapors, spray  
P264 - Wash exposed skin thoroughly after handling  
P270 - Do not eat, drink or smoke when using this product  
P280 - Wear protective gloves, eye protection  
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated

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clothing. Rinse skin with water/shower  
P308+P313 - IF exposed or concerned: Get medical advice/attention  
P370+P378 - In case of fire: Use carbon dioxide (CO<sub>2</sub>), powder, alcohol-resistant foam to extinguish  
P403+P235 - Store in a well-ventilated place. Keep cool  
P405 - Store locked up  
P501 - Dispose of contents/container to comply with local, state and federal regulations

### 2.3. Other hazards which do not result in classification

Other hazards not contributing to the classification : None.

### 2.4. Unknown acute toxicity (GHS US)

Not applicable

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

| Name                           | Product identifier | %     | GHS-US classification                                                                                                                |
|--------------------------------|--------------------|-------|--------------------------------------------------------------------------------------------------------------------------------------|
| Ethanol                        | (CAS No) 64-17-5   | 54.15 | Flam. Liq. 2, H225<br>Carc. 1A, H350<br>Repr. 2, H361                                                                                |
| Water                          | (CAS No) 7732-18-5 | 39.89 | Not classified                                                                                                                       |
| Isopropyl Alcohol (2-Propanol) | (CAS No) 67-63-0   | 3     | Flam. Liq. 2, H225<br>Eye Irrit. 2A, H319<br>STOT SE 3, H335                                                                         |
| Methanol                       | (CAS No) 67-56-1   | 2.85  | Flam. Liq. 2, H225<br>Acute Tox. 3 (Oral), H301<br>Acute Tox. 3 (Dermal), H311<br>Acute Tox. 3 (Inhalation), H331<br>STOT SE 1, H370 |
| 2',7'-Dichlorofluorescein, ACS | (CAS No) 76-54-0   | 0.1   | Skin Irrit. 2, H315<br>Eye Irrit. 2A, H319<br>STOT SE 3, H335                                                                        |
| Sodium Hydroxide               | (CAS No) 1310-73-2 | 0.01  | Acute Tox. 4 (Dermal), H312<br>Skin Corr. 1A, H314<br>Eye Dam. 1, H318<br>Aquatic Acute 3, H402                                      |

Full text of hazard classes and H-statements : see section 16

## SECTION 4: First-aid measures

### 4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical advice/attention.

First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

First-aid measures after skin contact : Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Call a POISON CENTER or doctor/physician if you feel unwell.

### 4.2. Most important symptoms and effects (acute and delayed)

Symptoms/injuries : Suspected of damaging fertility or the unborn child. Causes damage to organs.

Symptoms/injuries after inhalation : May cause respiratory irritation.

Symptoms/injuries after skin contact : Causes skin irritation.

Symptoms/injuries after eye contact : Causes serious eye irritation.

Symptoms/injuries after ingestion : Swallowing a small quantity of this material will result in serious health hazard. Blindness. Central nervous system depression. Dizziness. Drunkenness. Nausea. Vomiting.

### 4.3. Immediate medical attention and special treatment, if necessary

Obtain medical assistance.

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### SECTION 5: Fire-fighting measures

#### 5.1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
- Unsuitable extinguishing media : Do not use a heavy water stream.

#### 5.2. Specific hazards arising from the chemical

- Fire hazard : Flammable liquid and vapor.
- Explosion hazard : May form flammable/explosive vapor-air mixture.

#### 5.3. Special protective equipment and precautions for fire-fighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Remove ignition sources. Use special care to avoid static electric charges. No naked lights. No smoking.

##### 6.1.1. For non-emergency personnel

- Protective equipment : Gloves. Safety glasses.
- Emergency procedures : Evacuate unnecessary personnel.

##### 6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection. Avoid breathing mist, spray.
- Emergency procedures : Ventilate area.

#### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

#### 6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

#### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

- Additional hazards when processed : Handle empty containers with care because residual vapors are flammable.
- Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. No naked lights. No smoking. Take precautionary measures against static discharge. Use only non-sparking tools. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use only outdoors or in a well-ventilated area. Do not breathe mist, vapors, spray.
- Hygiene measures : Do not eat, drink or smoke when using this product. Wash exposed skin thoroughly after handling.

#### 7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/... equipment.
- Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Heat sources, Ignition sources, incompatible materials. Keep container tightly closed.
- Incompatible products : Strong oxidizers.
- Incompatible materials : Sources of ignition. Direct sunlight. Heat sources.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

2',7'-Dichlorofluorescein, ACS (76-54-0)

Not applicable

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| Sodium Hydroxide (1310-73-2)             |                             |                                                                                          |
|------------------------------------------|-----------------------------|------------------------------------------------------------------------------------------|
| ACGIH                                    | ACGIH Ceiling (mg/m³)       | 2 mg/m³ (Sodium hydroxide; USA; Momentary value; TLV - Adopted Value)                    |
| OSHA                                     | OSHA PEL (TWA) (mg/m³)      | 2 mg/m³                                                                                  |
| IDLH                                     | US IDLH (mg/m³)             | 10 mg/m³                                                                                 |
| NIOSH                                    | NIOSH REL (ceiling) (mg/m³) | 2 mg/m³                                                                                  |
| Water (7732-18-5)                        |                             |                                                                                          |
| Not applicable                           |                             |                                                                                          |
| Ethanol (64-17-5)                        |                             |                                                                                          |
| ACGIH                                    | ACGIH STEL (ppm)            | 1000 ppm (Ethanol; USA; Short time value; TLV - Adopted Value)                           |
| OSHA                                     | OSHA PEL (TWA) (mg/m³)      | 1900 mg/m³                                                                               |
| OSHA                                     | OSHA PEL (TWA) (ppm)        | 1000 ppm                                                                                 |
| IDLH                                     | US IDLH (ppm)               | 3300 ppm                                                                                 |
| NIOSH                                    | NIOSH REL (TWA) (mg/m³)     | 1900 mg/m³                                                                               |
| NIOSH                                    | NIOSH REL (TWA) (ppm)       | 1000 ppm                                                                                 |
| Isopropyl Alcohol (2-Propanol) (67-63-0) |                             |                                                                                          |
| ACGIH                                    | ACGIH TWA (ppm)             | 200 ppm (2-propanol; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value) |
| ACGIH                                    | ACGIH STEL (ppm)            | 400 ppm (2-propanol; USA; Short time value; TLV - Adopted Value)                         |
| OSHA                                     | OSHA PEL (TWA) (mg/m³)      | 980 mg/m³                                                                                |
| OSHA                                     | OSHA PEL (TWA) (ppm)        | 400 ppm                                                                                  |
| IDLH                                     | US IDLH (ppm)               | 2000 ppm                                                                                 |
| NIOSH                                    | NIOSH REL (TWA) (mg/m³)     | 980 mg/m³                                                                                |
| NIOSH                                    | NIOSH REL (TWA) (ppm)       | 400 ppm                                                                                  |
| NIOSH                                    | NIOSH REL (STEL) (mg/m³)    | 1225 mg/m³                                                                               |
| NIOSH                                    | NIOSH REL (STEL) (ppm)      | 500 ppm                                                                                  |
| Methanol (67-56-1)                       |                             |                                                                                          |
| ACGIH                                    | ACGIH TWA (ppm)             | 200 ppm (Methanol; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)   |
| ACGIH                                    | ACGIH STEL (ppm)            | 250 ppm (Methanol; USA; Short time value; TLV - Adopted Value)                           |
| OSHA                                     | OSHA PEL (TWA) (mg/m³)      | 260 mg/m³                                                                                |
| OSHA                                     | OSHA PEL (TWA) (ppm)        | 200 ppm                                                                                  |
| IDLH                                     | US IDLH (ppm)               | 6000 ppm                                                                                 |
| NIOSH                                    | NIOSH REL (TWA) (mg/m³)     | 250 mg/m³                                                                                |
| NIOSH                                    | NIOSH REL (TWA) (ppm)       | 200 ppm                                                                                  |
| NIOSH                                    | NIOSH REL (STEL) (mg/m³)    | 325 mg/m³                                                                                |
| NIOSH                                    | NIOSH REL (STEL) (ppm)      | 250 ppm                                                                                  |
| NIOSH                                    | Remark (NIOSH)              | Skin                                                                                     |

### 8.2. Appropriate engineering controls

Appropriate engineering controls

: Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure. Provide adequate general and local exhaust ventilation.

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### 8.3. Individual protection measures/Personal protective equipment

#### Personal protective equipment:

Gloves. Safety glasses.



#### Materials for protective clothing:

GIVE EXCELLENT RESISTANCE: nitrile rubber. GIVE POOR RESISTANCE: PVA

#### Hand protection:

Wear protective gloves

#### Eye protection:

Chemical goggles or safety glasses

#### Skin and body protection:

Wear suitable protective clothing

#### Respiratory protection:

Respiratory protection not required in normal conditions

#### Other information:

Do not eat, drink or smoke during use.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

|                                             |                                         |
|---------------------------------------------|-----------------------------------------|
| Physical state                              | : Liquid                                |
| Appearance                                  | : Liquid.                               |
| Color                                       | : Yellow                                |
| Odor                                        | : Alcohol odour                         |
| Odor threshold                              | : 100 ppm<br>188 mg/m <sup>3</sup>      |
| pH                                          | : No data available                     |
| Melting point                               | : No data available                     |
| Freezing point                              | : No data available                     |
| Boiling point                               | : No data available                     |
| Flash point                                 | : No data available                     |
| Relative evaporation rate (butyl acetate=1) | : 2.4                                   |
| Relative evaporation rate (ether=1)         | : 8.3                                   |
| Flammability (solid, gas)                   | : Flammable liquid and vapor.           |
| Vapor pressure                              | : No data available                     |
| Relative vapor density at 20 °C             | : 1.6                                   |
| Relative density                            | : No data available                     |
| Solubility                                  | : Soluble in water. Soluble in ethanol. |
| Log Pow                                     | : No data available                     |
| Auto-ignition temperature                   | : 363 °C                                |
| Decomposition temperature                   | : No data available                     |
| Viscosity, kinematic                        | : No data available                     |
| Viscosity, dynamic                          | : No data available                     |
| Explosion limits                            | : 4.3 - 19 vol %                        |
| Explosive properties                        | : No data available.                    |
| Oxidizing properties                        | : None.                                 |

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### 9.2. Other information

VOC content : 60 %

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Flammable liquid and vapor. May form flammable/explosive vapor-air mixture.

### 10.3. Possibility of hazardous reactions

Not established.

### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Open flame. Overheating. Heat. Sparks.

### 10.5. Incompatible materials

Strong oxidizers.

### 10.6. Hazardous decomposition products

Hydrogen fluoride. Carbon monoxide. Carbon dioxide. Hydrogen chloride.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Likely routes of exposure : Inhalation; Skin and eye contact

Acute toxicity : Not classified

| Sodium Hydroxide (1310-73-2)             |                                                                                                      |
|------------------------------------------|------------------------------------------------------------------------------------------------------|
| ATE US (dermal)                          | 1350.000 mg/kg body weight                                                                           |
| Water (7732-18-5)                        |                                                                                                      |
| LD50 oral rat                            | ≥ 90000 mg/kg                                                                                        |
| ATE US (oral)                            | 90000.000 mg/kg body weight                                                                          |
| Ethanol (64-17-5)                        |                                                                                                      |
| LD50 oral rat                            | 10740 mg/kg (Rat; Experimental value,Rat; Experimental value)                                        |
| LD50 dermal rabbit                       | > 16000 mg/kg (Rabbit; Literature study)                                                             |
| ATE US (oral)                            | 10740.000 mg/kg body weight                                                                          |
| Isopropyl Alcohol (2-Propanol) (67-63-0) |                                                                                                      |
| LD50 dermal rabbit                       | 12870 mg/kg (Rabbit; Experimental value; Equivalent or similar to OECD 402; 16.4; Rabbit)            |
| LC50 inhalation rat (mg/l)               | 73 mg/l/4h (Rat)                                                                                     |
| ATE US (oral)                            | 5045.000 mg/kg body weight                                                                           |
| ATE US (dermal)                          | 12870.000 mg/kg body weight                                                                          |
| ATE US (vapors)                          | 73.000 mg/l/4h                                                                                       |
| ATE US (dust, mist)                      | 73.000 mg/l/4h                                                                                       |
| Methanol (67-56-1)                       |                                                                                                      |
| LD50 oral rat                            | > 5000 mg/kg (Rat; BASF test; Literature study; 1187-2769 mg/kg bodyweight; Rat; Weight of evidence) |
| LD50 dermal rabbit                       | 15800 mg/kg (Rabbit; Literature study)                                                               |
| LC50 inhalation rat (mg/l)               | 85 mg/l/4h (Rat; Literature study)                                                                   |
| LC50 inhalation rat (ppm)                | 64000 ppm/4h (Rat; Literature study)                                                                 |

Skin corrosion/irritation : Not classified  
Serious eye damage/irritation : Not classified  
Respiratory or skin sensitization : Not classified  
Germ cell mutagenicity : Not classified  
Carcinogenicity : May cause cancer.

| Ethanol (64-17-5) |                            |
|-------------------|----------------------------|
| IARC group        | 1 - Carcinogenic to humans |

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### Isopropyl Alcohol (2-Propanol) (67-63-0)

|            |                      |
|------------|----------------------|
| IARC group | 3 - Not classifiable |
|------------|----------------------|

Reproductive toxicity : Suspected of damaging fertility or the unborn child.  
Specific target organ toxicity – single exposure : Causes damage to organs (central nervous system, optic nerve) (oral).

Specific target organ toxicity – repeated exposure : Not classified

Aspiration hazard : Not classified

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met. Harmful if swallowed.

Symptoms/injuries after inhalation : May cause respiratory irritation.

Symptoms/injuries after skin contact : Causes skin irritation.

Symptoms/injuries after eye contact : Causes serious eye irritation.

Symptoms/injuries after ingestion : Swallowing a small quantity of this material will result in serious health hazard. Blindness. Central nervous system depression. Dizziness. Drunkenness. Nausea. Vomiting.

## SECTION 12: Ecological information

### 12.1. Toxicity

#### Sodium Hydroxide (1310-73-2)

LC50 fish 1 45.4 mg/l (LC50; Other; 96 h; Salmo gairdneri; Static system; Fresh water; Experimental value)

#### Ethanol (64-17-5)

LC50 fish 1 14200 mg/l (LC50; US EPA; 96 h; Pimephales promelas; Flow-through system; Fresh water; Experimental value)

#### Isopropyl Alcohol (2-Propanol) (67-63-0)

LC50 fish 2 9640 mg/l (LC50; OECD 203: Fish, Acute Toxicity Test; 96 h; Pimephales promelas; Flow-through system; Fresh water; Experimental value)

EC50 Daphnia 2 13299 mg/l (EC50; Other; 48 h; Daphnia magna)

Threshold limit algae 1 > 1000 mg/l (EC50; UBA; 72 h; Scenedesmus subspicatus)

#### Methanol (67-56-1)

LC50 fish 1 15400 mg/l (LC50; EPA 660/3 - 75/009; 96 h; Lepomis macrochirus; Flow-through system; Fresh water; Experimental value)

EC50 Daphnia 1 > 10000 mg/l (EC50; DIN 38412-11; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)

LC50 fish 2 10800 mg/l (LC50; 96 h; Salmo gairdneri)

### 12.2. Persistence and degradability

#### Dichlorofluorescein, 0.1% Alcoholic

Persistence and degradability Not established.

#### 2',7'-Dichlorofluorescein, ACS (76-54-0)

Persistence and degradability Biodegradability in water: no data available.

#### Sodium Hydroxide (1310-73-2)

Persistence and degradability Biodegradability: not applicable. No test data on mobility of the substance available.

Biochemical oxygen demand (BOD) Not applicable

Chemical oxygen demand (COD) Not applicable

ThOD Not applicable

#### Water (7732-18-5)

Persistence and degradability Not established.

#### Ethanol (64-17-5)

Persistence and degradability Readily biodegradable in water. Biodegradable in the soil. Highly mobile in soil.

Biochemical oxygen demand (BOD) 0.8 - 0.967 g O<sub>2</sub>/g substance

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|                                                 |                                                                                                                                                                       |
|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Ethanol (64-17-5)</b>                        |                                                                                                                                                                       |
| Chemical oxygen demand (COD)                    | 1.7 g O <sub>2</sub> /g substance                                                                                                                                     |
| ThOD                                            | 2.1 g O <sub>2</sub> /g substance                                                                                                                                     |
| BOD (% of ThOD)                                 | 0.43                                                                                                                                                                  |
| <b>Isopropyl Alcohol (2-Propanol) (67-63-0)</b> |                                                                                                                                                                       |
| Persistence and degradability                   | Readily biodegradable in water. Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions. No test data on mobility of the substance available. |
| Biochemical oxygen demand (BOD)                 | 1.19 g O <sub>2</sub> /g substance                                                                                                                                    |
| Chemical oxygen demand (COD)                    | 2.23 g O <sub>2</sub> /g substance                                                                                                                                    |
| ThOD                                            | 2.4 g O <sub>2</sub> /g substance                                                                                                                                     |
| <b>Methanol (67-56-1)</b>                       |                                                                                                                                                                       |
| Persistence and degradability                   | Readily biodegradable in water. Biodegradable in the soil. Highly mobile in soil.                                                                                     |
| Biochemical oxygen demand (BOD)                 | 0.6 - 1.12 g O <sub>2</sub> /g substance                                                                                                                              |
| Chemical oxygen demand (COD)                    | 1.42 g O <sub>2</sub> /g substance                                                                                                                                    |
| ThOD                                            | 1.5 g O <sub>2</sub> /g substance                                                                                                                                     |
| BOD (% of ThOD)                                 | 0.8 (Literature study)                                                                                                                                                |

### 12.3. Bioaccumulative potential

|                                                 |                                                                                |
|-------------------------------------------------|--------------------------------------------------------------------------------|
| <b>Dichlorofluorescein, 0.1% Alcoholic</b>      |                                                                                |
| Bioaccumulative potential                       | Not established.                                                               |
| <b>2',7'-Dichlorofluorescein, ACS (76-54-0)</b> |                                                                                |
| Bioaccumulative potential                       | No bioaccumulation data available.                                             |
| <b>Sodium Hydroxide (1310-73-2)</b>             |                                                                                |
| Bioaccumulative potential                       | No bioaccumulation data available.                                             |
| <b>Water (7732-18-5)</b>                        |                                                                                |
| Bioaccumulative potential                       | Not established.                                                               |
| <b>Ethanol (64-17-5)</b>                        |                                                                                |
| BCF fish 1                                      | 1 (BCF; Other; 72 h; Cyprinus carpio; Static system; Fresh water; Read-across) |
| Log Pow                                         | -0.31 (Experimental value)                                                     |
| Bioaccumulative potential                       | Low potential for bioaccumulation (Log Kow < 4).                               |
| <b>Isopropyl Alcohol (2-Propanol) (67-63-0)</b> |                                                                                |
| Log Pow                                         | 0.05 (Weight of evidence approach; Other; 25 °C)                               |
| Bioaccumulative potential                       | Low potential for bioaccumulation (Log Kow < 4).                               |
| <b>Methanol (67-56-1)</b>                       |                                                                                |
| BCF fish 1                                      | < 10 (BCF; 72 h; Leuciscus idus)                                               |
| Log Pow                                         | -0.77 (Experimental value; Other)                                              |
| Bioaccumulative potential                       | Low potential for bioaccumulation (BCF < 500).                                 |

### 12.4. Mobility in soil

|                                                 |                                         |
|-------------------------------------------------|-----------------------------------------|
| <b>Ethanol (64-17-5)</b>                        |                                         |
| Surface tension                                 | 0.022 N/m (20 °C)                       |
| Log Koc                                         | Koc,PCKOCWIN v1.66; 1; Read-across      |
| <b>Isopropyl Alcohol (2-Propanol) (67-63-0)</b> |                                         |
| Surface tension                                 | 0.021 N/m (25 °C)                       |
| <b>Methanol (67-56-1)</b>                       |                                         |
| Surface tension                                 | 0.023 N/m (20 °C)                       |
| Log Koc                                         | Koc,PCKOCWIN v1.66; 1; Calculated value |

### 12.5. Other adverse effects

Effect on the global warming : No known effects from this product.

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|                   |                                       |
|-------------------|---------------------------------------|
| GWPmix comment    | : No known effects from this product. |
| Other information | : Avoid release to the environment.   |

### SECTION 13: Disposal considerations

#### 13.1. Disposal methods

|                                |                                                                                                                                                              |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Waste disposal recommendations | : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to comply with local, state and federal regulations. |
| Additional information         | : Handle empty containers with care because residual vapors are flammable.                                                                                   |
| Ecology - waste materials      | : Avoid release to the environment.                                                                                                                          |

### SECTION 14: Transport information

#### Department of Transportation (DOT)

In accordance with DOT

|                                  |                                                                 |
|----------------------------------|-----------------------------------------------------------------|
| Transport document description   | : UN1170 Ethanol solutions, 3, III                              |
| UN-No.(DOT)                      | : UN1170                                                        |
| Proper Shipping Name (DOT)       | : Ethanol solutions                                             |
| Transport hazard class(es) (DOT) | : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120 |
| Packing group (DOT)              | : III - Minor Danger                                            |
| Hazard labels (DOT)              | : 3 - Flammable liquid                                          |



|                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DOT Packaging Non Bulk (49 CFR 173.xxx)                          | : 203                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| DOT Packaging Bulk (49 CFR 173.xxx)                              | : 242                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| DOT Special Provisions (49 CFR 172.102)                          | : 24 - Alcoholic beverages containing more than 70 percent alcohol by volume must be transported as materials in Packing Group II. Alcoholic beverages containing more than 24 percent but not more than 70 percent alcohol by volume must be transported as materials in Packing Group III.<br>B1 - If the material has a flash point at or above 38 C (100 F) and below 93 C (200 F), then the bulk packaging requirements of 173.241 of this subchapter are applicable. If the material has a flash point of less than 38 C (100 F), then the bulk packaging requirements of 173.242 of this subchapter are applicable.<br>IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).<br>T2 - 1.5 178.274(d)(2) Normal..... 178.275(d)(3)<br>TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / 1 + a (tr - tf)$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling. |
| DOT Packaging Exceptions (49 CFR 173.xxx)                        | : 4b;150                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) | : 60 L                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)     | : 220 L                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| DOT Vessel Stowage Location                                      | : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Other information                                                | : No supplementary information available.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

##### Dichlorofluorescein, 0.1% Alcoholic

|                                     |                                                |
|-------------------------------------|------------------------------------------------|
| SARA Section 311/312 Hazard Classes | Immediate (acute) health hazard<br>Fire hazard |
|-------------------------------------|------------------------------------------------|

# Dichlorofluorescein, 0.1% Alcoholic

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All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

|                                |                |       |
|--------------------------------|----------------|-------|
| Isopropyl Alcohol (2-Propanol) | CAS No 67-63-0 | 3%    |
| Methanol                       | CAS No 67-56-1 | 2.85% |

### 2',7'-Dichlorofluorescein, ACS (76-54-0)

|                                     |                                 |
|-------------------------------------|---------------------------------|
| SARA Section 311/312 Hazard Classes | Immediate (acute) health hazard |
|-------------------------------------|---------------------------------|

### Sodium Hydroxide (1310-73-2)

|                                                              |         |
|--------------------------------------------------------------|---------|
| RQ (Reportable quantity, section 304 of EPA's List of Lists) | 1000 lb |
|--------------------------------------------------------------|---------|

|                                     |                                 |
|-------------------------------------|---------------------------------|
| SARA Section 311/312 Hazard Classes | Immediate (acute) health hazard |
|-------------------------------------|---------------------------------|

### Methanol (67-56-1)

|                                                              |         |
|--------------------------------------------------------------|---------|
| RQ (Reportable quantity, section 304 of EPA's List of Lists) | 5000 lb |
|--------------------------------------------------------------|---------|

|                                     |                                                |
|-------------------------------------|------------------------------------------------|
| SARA Section 311/312 Hazard Classes | Immediate (acute) health hazard<br>Fire hazard |
|-------------------------------------|------------------------------------------------|

## 15.2. International regulations

### CANADA

#### 2',7'-Dichlorofluorescein, ACS (76-54-0)

Listed on the Canadian DSL (Domestic Substances List)

#### Sodium Hydroxide (1310-73-2)

Listed on the Canadian DSL (Domestic Substances List)

#### Methanol (67-56-1)

Listed on the Canadian DSL (Domestic Substances List)

### EU-Regulations

No additional information available

## National regulations

#### 2',7'-Dichlorofluorescein, ACS (76-54-0)

Not listed on the Canadian IDL (Ingredient Disclosure List)

#### Ethanol (64-17-5)

Listed on IARC (International Agency for Research on Cancer)

## 15.3. US State regulations

### Dichlorofluorescein, 0.1% Alcoholic

|                                                       |    |
|-------------------------------------------------------|----|
| U.S. - California - Proposition 65 - Carcinogens List | No |
|-------------------------------------------------------|----|

|                                                             |     |
|-------------------------------------------------------------|-----|
| U.S. - California - Proposition 65 - Developmental Toxicity | Yes |
|-------------------------------------------------------------|-----|

|                                                                     |    |
|---------------------------------------------------------------------|----|
| U.S. - California - Proposition 65 - Reproductive Toxicity - Female | No |
|---------------------------------------------------------------------|----|

|                                                                   |    |
|-------------------------------------------------------------------|----|
| U.S. - California - Proposition 65 - Reproductive Toxicity - Male | No |
|-------------------------------------------------------------------|----|

California Proposition 65 - This product contains, or may contain, trace quantities of a substance(s) known to the state of California to cause cancer, developmental and/or reproductive harm

# Dichlorofluorescein, 0.1% Alcoholic

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| Methanol (67-56-1)                                    |                                                             |                                                                     |                                                                   |                                  |
|-------------------------------------------------------|-------------------------------------------------------------|---------------------------------------------------------------------|-------------------------------------------------------------------|----------------------------------|
| U.S. - California - Proposition 65 - Carcinogens List | U.S. - California - Proposition 65 - Developmental Toxicity | U.S. - California - Proposition 65 - Reproductive Toxicity - Female | U.S. - California - Proposition 65 - Reproductive Toxicity - Male | No significant risk level (NSRL) |
| No                                                    | Yes                                                         | No                                                                  | No                                                                |                                  |

### SECTION 16: Other information

Revision date : 05/03/2017

Other information : None.

Full text of H-phrases: see section 16:

|      |                                                     |
|------|-----------------------------------------------------|
| H225 | Highly flammable liquid and vapor                   |
| H226 | Flammable liquid and vapor                          |
| H301 | Toxic if swallowed                                  |
| H311 | Toxic in contact with skin                          |
| H312 | Harmful in contact with skin                        |
| H314 | Causes severe skin burns and eye damage             |
| H315 | Causes skin irritation                              |
| H318 | Causes serious eye damage                           |
| H319 | Causes serious eye irritation                       |
| H331 | Toxic if inhaled                                    |
| H335 | May cause respiratory irritation                    |
| H350 | May cause cancer                                    |
| H361 | Suspected of damaging fertility or the unborn child |
| H370 | Causes damage to organs                             |
| H402 | Harmful to aquatic life                             |

NFPA health hazard

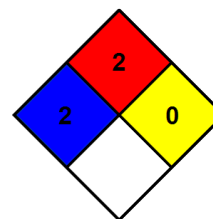
: 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

NFPA fire hazard

: 2 - Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur.

NFPA reactivity

: 0 - Material that in themselves are normally stable, even under fire conditions.



HMIS III Rating

Health

: 2 Moderate Hazard - Temporary or minor injury may occur

Flammability

: 2 Moderate Hazard - Materials which must be moderately heated or exposed to high ambient temperatures before ignition will occur. Includes liquids having a flash point at or above 100 F but below 200 F. (Classes II & IIIA)

Physical

: 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Personal protection

: G

G - Safety glasses, Gloves, Vapor respirator

# Dichlorofluorescein, 0.1% Alcoholic

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