SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier
- Product form: Mixture
- Product name: Methyl Red TS
- Product code: LC17150

1.2. Relevant identified uses of the substance or mixture and uses advised against
- Use of the substance/mixture: For laboratory and manufacturing use only.

1.3. Details of the supplier of the safety data sheet
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 - www.labchem.com

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

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
Classification (GHS-US)
- Flam. Liq. 2 H225
- Carc. 1A H350
- Repr. 2 H361

Full text of H-phrases: see section 16

2.2. Label elements
GHS-US labeling
- Hazard pictograms (GHS-US):
  - GHS02
  - GHS08

Signal word (GHS-US): Danger
- Hazard statements (GHS-US):
  - H225 - Highly flammable liquid and vapor
  - H350 - May cause cancer (oral)
  - H361 - Suspected of damaging the unborn child (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
  - P280 - Wear protective gloves, eye protection
  - P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
  - P308+P313 - IF exposed or concerned: Get medical advice/attention
  - P370+P378 - In case of fire: Use alcohol resistant foam, carbon dioxide (CO2), extinguishing powder 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
Other hazards not contributing to the classification: None under normal conditions.
2.4. **Unknown acute toxicity (GHS US)**

Not applicable

**SECTION 3: Composition/information on ingredients**

3.1. **Substance**

Not applicable

3.2. **Mixture**

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification (GHS-US)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>(CAS No) 64-17-5</td>
<td>99.9</td>
<td>Flam. Liq. 2, H225</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Carc. 1A, H350</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Repr. 2, H361</td>
</tr>
<tr>
<td>Methyl Red, Free Acid</td>
<td>(CAS No) 493-52-7</td>
<td>0.1</td>
<td>Muta. 2, H341</td>
</tr>
</tbody>
</table>

Full text of H-phrases: 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 : Allow victim to breathe fresh air. Allow the victim to rest.

First-aid measures after skin contact : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing.

First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. **Most important symptoms and effects, both acute and delayed**

Symptoms/injuries : Suspected of damaging fertility or the unborn child.

Symptoms/injuries after inhalation : Slight irritation.

Symptoms/injuries after skin contact : May stain the skin.

Symptoms/injuries after eye contact : Mild eye irritation.


4.3. **Indication of any immediate medical attention and special treatment needed**

Obtain medical assistance.

**SECTION 5: Firefighting measures**

5.1. **Extinguishing media**


Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. **Special hazards arising from the substance or mixture**

Fire hazard : Highly flammable liquid and vapor.

Explosion hazard : May form flammable/explosive vapor-air mixture.

5.3. **Advice for firefighters**

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 : Safety glasses. Gloves.

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. **For emergency responders**

Protective equipment : Equip cleanup crew with proper protection.

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. Use only non-sparking tools. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

#### 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 in fireproof place. Keep container tightly closed.

#### 7.3. Specific end use(s)

No additional information available.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

<table>
<thead>
<tr>
<th>Methyl Red TS</th>
<th>ACGIH</th>
<th>Not applicable</th>
<th>OSHA</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl Red, Free Acid (493-52-7)</td>
<td>ACGIH</td>
<td>Not applicable</td>
<td>OSHA</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Ethanol (64-17-5)</td>
<td>ACGIH</td>
<td>Not applicable</td>
<td>OSHA</td>
<td>OSHA PEL (TWA) (mg/m³)</td>
</tr>
<tr>
<td></td>
<td>OSHA</td>
<td>OSHA PEL (TWA) (ppm)</td>
<td>1000 ppm</td>
<td></td>
</tr>
</tbody>
</table>

#### 8.2. Exposure controls

- **Appropriate engineering controls**: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation.
- **Personal protective equipment**: Avoid all unnecessary exposure.

- **Hand protection**: Wear protective gloves.
- **Eye protection**: Chemical goggles or safety glasses.
- **Respiratory protection**: Wear appropriate mask.
- **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
- **Color**: Orange
Methyl Red TS
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Odor: Alcohol odour
Odor threshold: No data available
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): No data available
Flammability (solid, gas): No data available
Explosion limits: No data available
Explosive properties: No data available
Oxidizing properties: No data available
Vapor pressure: No data available
Relative density: No data available
Relative vapor density at 20 °C: No data available
Specific gravity / density: 0.8 g/ml
Water: Solubility in water of component(s) of the mixture:
• Ethanol:

Log Pow: No data available
Log Kow: No data available
Auto-ignition temperature: No data available
Decomposition temperature: No data available
Viscosity: No data available
Viscosity, kinematic: No data available
Viscosity, dynamic: No data available

9.2. Other information
No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity
No additional information available

10.2. Chemical stability
Highly 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.

10.5. Incompatible materials
Strong oxidizers.

10.6. Hazardous decomposition products

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Likely routes of exposure: Inhalation; Skin and eye contact
Acute toxicity: Not classified

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
Methyl Red TS
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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 (oral).

### Methyl Red, Free Acid (493-52-7)

| IARC group | 3 - Not classifiable |

### Ethanol (64-17-5)

| IARC group | 1 - Carcinogenic to humans |

- Reproductive toxicity : Suspected of damaging the unborn child (oral).
- Specific target organ toxicity (single exposure) : Not classified
- 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.
  - Symptoms/injuries after inhalation : Slight irritation.
  - Symptoms/injuries after skin contact : May stain the skin.
  - Symptoms/injuries after eye contact : Mild eye irritation.

### SECTION 12: Ecological information

#### 12.1. Toxicity

**Ethanol (64-17-5)**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fish 1</td>
<td>14200 mg/l (96 h; Pimephales promelas)</td>
</tr>
<tr>
<td>EC50 Daphnia 1</td>
<td>9300 mg/l (48 h; Daphnia magna)</td>
</tr>
<tr>
<td>LC50 fish 2</td>
<td>13000 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)</td>
</tr>
<tr>
<td>EC50 Daphnia 2</td>
<td>10800 mg/l (24 h; Daphnia magna)</td>
</tr>
<tr>
<td>Threshold limit other aquatic organisms 1</td>
<td>65 mg/l (72 h; Protozoa)</td>
</tr>
<tr>
<td>Threshold limit algae 1</td>
<td>1450 mg/l (192 h; Microcystis aeruginosa; Growth rate)</td>
</tr>
<tr>
<td>Threshold limit algae 2</td>
<td>5000 mg/l (168 h; Scenedesmus quadricauda; Growth rate)</td>
</tr>
</tbody>
</table>

#### 12.2. Persistence and degradability

**Methyl Red TS**

Persistence and degradability : Not established.

**Ethanol (64-17-5)**

- Biochemical oxygen demand (BOD) : 0.8 - 0.967 g O₂/g substance
- Chemical oxygen demand (COD) : 1.70 g O₂/g substance
- ThOD : 2.10 g O₂/g substance
- BOD (% of ThOD) : 0.43 % ThOD

#### 12.3. Bioaccumulative potential

**Methyl Red TS**

Bioaccumulative potential : Not established.

**Ethanol (64-17-5)**

- BCF fish 1 : 1 (72 h; Cyprinus carpio)
- Log Pow : -0.31 (Experimental value)
- Bioaccumulative potential : Low potential for bioaccumulation (Log Kow < 4).

#### 12.4. Mobility in soil
Methyl Red TS
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<table>
<thead>
<tr>
<th>Ethanol (64-17-5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface tension</td>
</tr>
</tbody>
</table>

12.5. Other adverse effects

Effect on the global warming : No known ecological damage caused by this product.

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment 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, II

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

Hazard labels (DOT) : 3 - Flammable liquid

Packing group (DOT) : II - Medium Danger

DOT Packaging Non Bulk (49 CFR 173.xxx) : 202

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.

IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). 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.

T4 - 2.65 178.274(d)(2) Normal............. 178.275(d)(3)

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) : 5 L

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 60 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.

Additional information

Other information : No supplementary information available.

ADR

No additional information available

Transport by sea

No additional information available
SECTION 15: Regulatory information

15.1. US Federal regulations

<table>
<thead>
<tr>
<th>Methyl Red TS</th>
<th>Delayed (chronic) health hazard</th>
<th>Immediate (acute) health hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>SARA Section 311/312 Hazard Classes</td>
<td>Fire hazard</td>
<td></td>
</tr>
</tbody>
</table>

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

This product or mixture does not contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

No additional information available

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Not classified

National regulations

| Ethanol (64-17-5) | Listed on IARC (International Agency for Research on Cancer) |

15.3. US State regulations

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

SECTION 16: Other information

Other information : None.

Full text of H-phrases: see section 16:

| Carc. 1A | Carcinogenicity Category 1A |
| Flam. Liq. 2 | Flammable liquids Category 2 |
| Muta. 2 | Germ cell mutagenicity Category 2 |
| Repr. 2 | Reproductive toxicity Category 2 |
| H225 | Highly flammable liquid and vapor |
| H341 | Suspected of causing genetic defects |
| H350 | May cause cancer |
| H361 | Suspected of damaging fertility or the unborn child |

NFPA health hazard

: 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

NFPA fire hazard

: 3 - Liquids and solids that can be ignited under almost all ambient conditions.

NFPA reactivity

: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.
<table>
<thead>
<tr>
<th>HMIS III Rating</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>2 Moderate Hazard - Temporary or minor injury may occur</td>
</tr>
<tr>
<td>Flammability</td>
<td>3 Serious Hazard - Materials capable of ignition under almost all normal temperature conditions. Includes flammable liquids with flash points below 73 F and boiling points above 100 F. as well as liquids with flash points between 73 F and 100 F. (Classes IB &amp; IC)</td>
</tr>
<tr>
<td>Physical</td>
<td>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.</td>
</tr>
<tr>
<td>Personal Protection</td>
<td>G</td>
</tr>
<tr>
<td></td>
<td>G - Safety glasses, Gloves, Vapor respirator</td>
</tr>
</tbody>
</table>

SDS US (GHS HazCom 2012)

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