



MATERIAL SAFETY DATA SHEET  
Thymolphthalein indicator solution

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** Thymolphthalein indicator solution  
**Catalog Numbers:** T/1480L/08  
**Synonyms:** None.  
**Company Identification:** Fisher Scientific UK  
 Bishop Meadow Road, Loughborough  
 Leics. LE11 5RG  
**For information in Europe, call:** (01509) 231166  
**Emergency Number, Europe:** 01509 231166

### Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name:	%	EINECS#	Hazard Symbols:	Risk Phrases:
64-17-5	Ethanol	65	200-578-6	F	11
67-56-1	Methanol	2.56	200-659-6	F T	11 23/24/25 39/23/24/25
67-64-1	Acetone	2	200-662-2	F XI	11 36 66 67
125-20-2	Thymolphthalein Indicator	0.2	204-729-7		
7732-18-5	Water	30.24	231-791-2		

Text for R-phrases: see Section 16

**Hazard Symbols:** None listed

**Risk Phrases:** 10

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

*Flammable.*

#### Potential Health Effects

- Eye:** Causes severe eye irritation. May cause painful sensitization to light. May cause chemical conjunctivitis and corneal damage. Inhalation, ingestion or skin absorption of methanol can cause significant disturbances in vision, including blindness.
- Skin:** Causes moderate skin irritation. May cause cyanosis of the extremities. Methanol can be absorbed through the skin, producing systemic effects that include visual disturbances.
- Ingestion:** May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause systemic toxicity with acidosis. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure.
- Inhalation:** Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. Causes respiratory tract irritation. May cause narcotic effects in high concentration. Vapors may cause dizziness or suffocation.
- Chronic:** Prolonged or repeated skin contact may cause dermatitis. May cause reproductive and fetal effects. Laboratory experiments have resulted in mutagenic effects. Animal studies have

reported the development of tumors. Prolonged exposure may cause liver, kidney, and heart damage.

#### Section 4 - First Aid Measures

<b>Eyes:</b>	Get medical aid. Gently lift eyelids and flush continuously with water.
<b>Skin:</b>	Get medical aid. Wash clothing before reuse. Flush skin with plenty of soap and water.
<b>Ingestion:</b>	Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.
<b>Inhalation:</b>	Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation.
<b>Notes to Physician:</b>	Treat symptomatically and supportively. Persons with skin or eye disorders or liver, kidney, chronic respiratory diseases, or central and peripheral nervous system diseases may be at increased risk from exposure to this substance.
<b>Antidote:</b>	Replace fluid and electrolytes.

#### Section 5 - Fire Fighting Measures

<b>General Information:</b>	Containers can build up pressure if exposed to heat and/or fire. As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. Will burn if involved in a fire. Flammable Liquid. Can release vapors that form explosive mixtures at temperatures above the flashpoint. Use water spray to keep fire-exposed containers cool. Containers may explode in the heat of a fire.
<b>Extinguishing Media:</b>	For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. For large fires, use water spray, fog, or alcohol-resistant foam. Use water spray to cool fire-exposed containers. Water may be ineffective. Do NOT use straight streams of water.

#### Section 6 - Accidental Release Measures

<b>General Information:</b>	Use proper personal protective equipment as indicated in Section 8.
<b>Spills/Leaks:</b>	Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation. A vapor suppressing foam may be used to reduce vapors.

#### Section 7 - Handling and Storage

<b>Handling:</b>	Wash thoroughly after handling. Use only in a well-ventilated area. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Keep away from heat, sparks and flame. Avoid ingestion and inhalation. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.
<b>Storage:</b>	Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a tightly closed container. Keep from contact with oxidizing materials. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammables-area. Do not store near perchlorates, peroxides, chromic acid or nitric acid.

#### Section 8 - Exposure Controls, Personal Protection

##### Engineering Controls:

Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

##### Exposure Limits

CAS# 64-17-5:

United Kingdom, WEL - TWA: 1000 ppm TWA; 1920 mg/m<sup>3</sup> TWA United Kingdom, WEL - STEL: 3000 ppm STEL; 5760 mg/m<sup>3</sup> STEL

United States OSHA: 1000 ppm TWA; 1900 mg/m<sup>3</sup> TWA

Belgium - TWA: 1000 ppm VLE; 1907 mg/m<sup>3</sup> VLE

France - VME: 1000 ppm VME; 1900 mg/m<sup>3</sup> VME France - VLE: 5000 ppm VLE; 9500 mg/m<sup>3</sup> VLE

Germany: 500 ppm TWA; 960 mg/m<sup>3</sup> TWA

Malaysia: 1000 ppm TWA; 1880 mg/m<sup>3</sup> TWA

Netherlands: 500 ppm MAC; 1000 mg/m<sup>3</sup> MAC

Russia: 1000 mg/m<sup>3</sup> TWA

Spain: 1000 ppm VLA-ED; 1910 mg/m<sup>3</sup> VLA-ED

CAS# 67-56-1:

United Kingdom, WEL - TWA: 200 ppm TWA; 266 mg/m<sup>3</sup> TWA United Kingdom, WEL - STEL: 250 ppm STEL; 333 mg/m<sup>3</sup> STEL

United States OSHA: 200 ppm TWA; 260 mg/m<sup>3</sup> TWA

Belgium - TWA: 200 ppm VLE; 266 mg/m<sup>3</sup> VLE Belgium - STEL: 250 ppm VLE; 333 mg/m<sup>3</sup> VLE

France - VME: 200 ppm VME; 260 mg/m<sup>3</sup> VME France - VLE: 1000 ppm VLE; 1300 mg/m<sup>3</sup> VLE

Germany: 200 ppm TWA; 270 mg/m<sup>3</sup> TWA Germany: Skin absorber

Japan: 200 ppm OEL; 260 mg/m<sup>3</sup> OEL

Malaysia: 200 ppm TWA; 262 mg/m<sup>3</sup> TWA

Netherlands: 200 ppm MAC; 260 mg/m<sup>3</sup> MAC

Russia: 5 mg/m<sup>3</sup> TWA

Spain: 200 ppm VLA-ED; 266 mg/m<sup>3</sup> VLA-ED Spain: 250 ppm VLA-EC; 333 mg/m<sup>3</sup> VLA-EC

CAS# 67-64-1:

United Kingdom, WEL - TWA: 500 ppm TWA; 1210 mg/m<sup>3</sup> TWA United Kingdom, WEL - STEL: 1500 ppm STEL; 3620 mg/m<sup>3</sup> STEL

United States OSHA: 1000 ppm TWA; 2400 mg/m<sup>3</sup> TWA

Belgium - TWA: 500 ppm VLE; 1210 mg/m<sup>3</sup> VLE Belgium - STEL: 1000 ppm VLE; 2420 mg/m<sup>3</sup> VLE

France - VME: 750 ppm VME; 1800 mg/m<sup>3</sup> VME

Germany: 500 ppm TWA; 1200 mg/m<sup>3</sup> TWA

Japan: 200 ppm OEL; 470 mg/m<sup>3</sup> OEL

Malaysia: 500 ppm TWA; 1187 mg/m<sup>3</sup> TWA

Netherlands: 750 ppm MAC; 1780 mg/m<sup>3</sup> MAC

Russia: 200 mg/m<sup>3</sup> TWA

Spain: 500 ppm VLA-ED; 1210 mg/m<sup>3</sup> VLA-ED

CAS# 125-20-2:

CAS# 7732-18-5:

### Personal Protective Equipment

**Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin:** Wear appropriate protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

## Section 9 - Physical and Chemical Properties

**Physical State:** Liquid  
**Color:** Not available  
**Odor:** Not available  
**pH:** Not available  
**Vapor Pressure:** Not available  
**Viscosity:** Not available  
**Boiling Point:** Not available  
**Freezing/Melting Point:** Not available  
**Autoignition Temperature:** Not available.  
**Flash Point:** 24 deg C ( 75.20 deg F)  
**Explosion Limits: Lower:** Not available  
**Explosion Limits: Upper:** Not available  
**Decomposition Temperature:** Not available  
**Solubility in water:** Not available  
**Specific Gravity/Density:**  
**Molecular Formula:**  
**Molecular Weight:**

## Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures.

**Conditions to Avoid:** Incompatible materials, ignition sources, excess heat, oxidizers.

**Incompatibilities with Other Materials:** Strong oxidizing agents, acids, alkali metals, ammonia, hydrazine, peroxides, sodium, acid anhydrides, calcium hypochlorite, chromyl chloride, nitrosyl perchlorate, bromine pentafluoride, perchloric acid, silver nitrate, mercuric nitrate, potassium tert-butoxide, magnesium perchlorate, acid chlorides, platinum, uranium hexafluoride, silver oxide, iodine heptafluoride, acetyl bromide, disulfuryl difluoride, tetrachlorosilane + water, acetyl chloride, permanganic acid, ruthenium (VIII) oxide, uranyl perchlorate, potassium dioxide.

**Hazardous Decomposition Products:** Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.

**Hazardous Polymerization:** Has not been reported.

## Section 11 - Toxicological Information

**RTECS#:** CAS# 64-17-5: KQ6300000  
CAS# 67-56-1: PC1400000  
CAS# 67-64-1: AL3150000  
CAS# 125-20-2: None listed  
CAS# 7732-18-5: ZC0110000

**LD50/LC50:** RTECS:  
**CAS# 64-17-5:** Draize test, rabbit, eye: 500 mg Severe;  
Draize test, rabbit, eye: 500 mg/24H Mild;  
Draize test, rabbit, skin: 20 mg/24H Moderate;  
Inhalation, mouse: LC50 = 39 gm/m<sup>3</sup>/4H;  
Inhalation, rat: LC50 = 20000 ppm/10H;  
Oral, mouse: LD50 = 3450 mg/kg;  
Oral, rabbit: LD50 = 6300 mg/kg;  
Oral, rat: LD50 = 7060 mg/kg;  
Oral, rat: LD50 = 9000 mg/kg;

RTECS:

**CAS# 67-56-1:** Draize test, rabbit, eye: 40 mg Moderate;  
Draize test, rabbit, eye: 100 mg/24H Moderate;  
Draize test, rabbit, skin: 20 mg/24H Moderate;  
Inhalation, rabbit: LC50 = 81000 mg/m<sup>3</sup>/14H;  
Inhalation, rat: LC50 = 64000 ppm/4H;  
Oral, mouse: LD50 = 7300 mg/kg;  
Oral, rabbit: LD50 = 14200 mg/kg;  
Oral, rat: LD50 = 5600 mg/kg;  
Skin, rabbit: LD50 = 15800 mg/kg;

RTECS:

**CAS# 67-64-1:** Dermal, guinea pig: LD50 = >9400 uL/kg;  
Draize test, rabbit, eye: 20 mg Severe;  
Draize test, rabbit, eye: 20 mg/24H Moderate;  
Draize test, rabbit, eye: 10 uL Mild;  
Draize test, rabbit, skin: 500 mg/24H Mild;  
Inhalation, mouse: LC50 = 44 gm/m<sup>3</sup>/4H;  
Inhalation, rat: LC50 = 50100 mg/m<sup>3</sup>/8H;  
Oral, mouse: LD50 = 3 gm/kg;  
Oral, rabbit: LD50 = 5340 mg/kg;  
Oral, rat: LD50 = 5800 mg/kg;

RTECS:

**CAS# 125-20-2:**

RTECS:

**CAS# 7732-18-5:** Oral, rat: LD50 = >90 mL/kg;

**Carcinogenicity:** Ethanol - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.  
Methanol - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.  
Acetone - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.  
Thymolphthalein Indicator - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.  
Water - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

**Other:** Standard Draize Test(Skin, rabbit) = 20 mg/24H (Moderate) Standard Draize Test:  
Administration into the eye (rabbit) = 500 mg (Severe).

## Section 12 - Ecological Information

**Ecotoxicity:** Fish: Rainbow trout: LC50 = 12900-15300 mg/L; 96 Hr; Flow-through @ 24-24.3°C  
Fish: Rainbow trout: LC50 = 11200 mg/L; 24 Hr; Fingerling (Unspecified)  
Bacteria: Phytobacterium phosphoreum: EC50 = 34900 mg/L; 5-30 min; Microtox test

## Section 13 - Disposal Considerations

Products considered hazardous for supply are classified as Special Waste and the disposal of such chemicals is covered by regulations which may vary according to location. Contact a specialist disposal company or the local authority or advice. Empty containers must be decontaminated before returning for recycling.

## Section 14 - Transport Information

	<b>IATA</b>	<b>IMO</b>	<b>RID/ADR</b>
<b>Shipping Name:</b>	ETHANOL SOLUTION	ETHANOL SOLUTION	ETHANOL SOLUTION
<b>Hazard Class:</b>	3	3	3
<b>UN Number:</b>	1170	1170	1170
<b>Packing Group:</b>	III	III	III

USA RQ: CAS# 67-56-1: 5000 lb final RQ; 2270 kg final RQ

USA RQ: CAS# 67-64-1: 5000 lb final RQ; 2270 kg final RQ

## Section 15 - Regulatory Information

## European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: Not available

Risk Phrases:

R 10 Flammable.

Safety Phrases:

S 7 Keep container tightly closed.

S 9 Keep container in a well-ventilated place.

S 16 Keep away from sources of ignition - No smoking.

S 33 Take precautionary measures against static discharges.

S 36/37 Wear suitable protective clothing and gloves.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (Water Danger/Protection)

CAS# 64-17-5: 0

CAS# 67-56-1: 1

CAS# 67-64-1: 0

CAS# 125-20-2: 2

CAS# 7732-18-5: Not available

Canada

CAS# 64-17-5 is listed on Canada's DSL List

CAS# 67-56-1 is listed on Canada's DSL List

CAS# 67-64-1 is listed on Canada's DSL List

CAS# 125-20-2 is listed on Canada's DSL List

CAS# 7732-18-5 is listed on Canada's DSL List

## US Federal

TSCA

CAS# 64-17-5 is listed on the TSCA Inventory.

CAS# 67-56-1 is listed on the TSCA Inventory.

CAS# 67-64-1 is listed on the TSCA Inventory.

CAS# 125-20-2 is listed on the TSCA Inventory.

CAS# 7732-18-5 is listed on the TSCA Inventory.

## Section 16 - Other Information

### Text for R-phrases from Section 2

R 11 Highly flammable.

R 23/24/25 Toxic by inhalation, in contact with skin and if swallowed.

R 36 Irritating to eyes.

R 39/23/24/25 Toxic : danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.

R 66 Repeated exposure may cause skin dryness or cracking.

R 67 Vapours may cause drowsiness and dizziness.

**MSDS Creation Date:** 4/20/1998

**Revision #5 Date** 1/27/2005

*The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any*

*special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.*

-----