



MATERIAL SAFETY DATA SHEET
0.04% Methyl orange solution

Section 1 - Chemical Product and Company Identification

MSDS Name: 0.04% Methyl orange solution
Catalog Numbers: M/5000L/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	Ethyl alcohol	15	200-578-6	F	11
547-58-0	C.I. Acid orange 52	0.04	208-925-3		
7732-18-5	Water	84.96	231-791-2		

Text for R-phrases: see Section 16

Hazard Symbols: F



Risk Phrases: 10

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Flammable.

Potential Health Effects

Eye: Contact produces irritation, tearing, and burning pain.
Skin: Prolonged and/or repeated contact may cause irritation and/or dermatitis.
Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause central nervous system depression.
Inhalation: Inhalation of vapor may cause respiratory tract irritation. May cause effects similar to those described for ingestion.
Chronic: May cause reproductive and fetal effects.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.
Skin: Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.

Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Get medical aid immediately.

Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician:

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors can travel to a source of ignition and flash back. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Flammable liquid and vapor.

Extinguishing Media: Use dry chemical, carbon dioxide, or alcohol-resistant foam.

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Wash area with soap and water. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Use only in a well-ventilated area. Avoid contact with eyes, skin, and clothing. Keep away from heat, sparks and flame. Avoid ingestion and inhalation.

Storage: Keep away from sources of ignition. Keep container closed when not in use. Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:

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/m³ TWA United Kingdom, WEL - STEL: 3000 ppm STEL; 5760 mg/m³ STEL

United States OSHA: 1000 ppm TWA; 1900 mg/m³ TWA

Belgium - TWA: 1000 ppm VLE; 1907 mg/m³ VLE

France - VME: 1000 ppm VME; 1900 mg/m³ VME France - VLE: 5000 ppm VLE; 9500 mg/m³ VLE

Germany: 500 ppm TWA; 960 mg/m³ TWA

Malaysia: 1000 ppm TWA; 1880 mg/m³ TWA

Netherlands: 500 ppm MAC; 1000 mg/m³ MAC

Russia: 1000 mg/m³ TWA

Spain: 1000 ppm VLA-ED; 1910 mg/m³ VLA-ED

CAS# 547-58-0:

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 gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Color: red-orange

Odor: Alcohol odor.

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: Not available

Explosion Limits: Lower: Not available

Explosion Limits: Upper: Not available

Decomposition Temperature: Not available

Solubility in water: Soluble in water.

Specific Gravity/Density:

Molecular Formula: Mixture

Molecular Weight: 0

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

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

Incompatibilities with Other Materials Not available

Hazardous Decomposition Products Nitrogen oxides, carbon monoxide, oxides of sulfur, carbon dioxide, toxic fumes of sodium oxide.

Hazardous Polymerization Has not been reported.

Section 11 - Toxicological Information

RTECS#: CAS# 64-17-5: KQ6300000
CAS# 547-58-0: DB6327000
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/m³/4H;
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# 547-58-0: Oral, rat: LD50 = 60 mg/kg;

RTECS:

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

Carcinogenicity: Ethyl alcohol - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
C.I. Acid orange 52 - 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: See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Not available

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

	IATA	IMO	RID/ADR
Shipping Name:	ETHANOL SOLUTION	ETHANOL SOLUTION	ETHANOL SOLUTION
Hazard Class:	3	3	3
UN Number:	1170	1170	1170
Packing Group:	II	II	II

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: F

Risk Phrases:

R 10 Flammable.

Safety Phrases:

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

S 24/25 Avoid contact with skin and eyes.

WGK (Water Danger/Protection)

CAS# 64-17-5: 0

CAS# 547-58-0: 2

CAS# 7732-18-5: Not available

Canada

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

CAS# 547-58-0 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# 547-58-0 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.

MSDS Creation Date: 12/12/1997

Revision #5 Date 10/03/2005

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.
