

SAFETY DATA SHEET

Revision Date 24-Feb-2020

Revision Number 2

1. Identification

Product Name Methyl Red, 0.1% w/v solution in ethanol

Cat No. : 38698

Synonyms No information available

Recommended Use Laboratory chemicals.

Uses advised against Food, drug, pesticide or biocidal product use.

Details of the supplier of the safety data sheet

Company

Alfa Aesar
Thermo Fisher Scientific Chemicals, Inc.
30 Bond Street
Ward Hill, MA 01835-8099
Tel: 800-343-0660
Fax: 800-322-4757
Email: tech@alfa.com
www.alfa.com

Emergency Telephone Number

During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660.
After normal business hours, call Carechem 24 at (866) 928-0789.

2. Hazard(s) identification

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Flammable liquids	Category 2
Acute oral toxicity	Category 4
Acute Inhalation Toxicity - Vapors	Category 3
Serious Eye Damage/Eye Irritation	Category 2
Specific target organ toxicity (single exposure)	Category 1
Target Organs - Optic nerve, Central nervous system (CNS).	

Label Elements

Signal Word

Danger

Hazard Statements

Highly flammable liquid and vapor
Harmful if swallowed
Causes serious eye irritation
Toxic if inhaled

Causes damage to organs



Precautionary Statements

Prevention

Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Use only outdoors or in a well-ventilated area
 Do not breathe dust/fume/gas/mist/vapors/spray
 Keep away from heat/sparks/open flames/hot surfaces. - No smoking
 Keep container tightly closed
 Ground/bond container and receiving equipment
 Use explosion-proof electrical/ventilating/lighting/equipment
 Use only non-sparking tools
 Take precautionary measures against static discharge
 Wear protective gloves/protective clothing/eye protection/face protection
 Keep cool

Response

IF exposed: Call a POISON CENTER or doctor/physician

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 Call a POISON CENTER or doctor/physician

Skin

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower

Eyes

IF IN EYES: 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

Ingestion

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
 Rinse mouth

Fire

In case of fire: Use CO₂, dry chemical, or foam for extinction

Storage

Store in a well-ventilated place. Keep container tightly closed
 Store locked up

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Other hazards

Poison, may be fatal or cause blindness if swallowed. Vapor harmful. CANNOT BE MADE NON-POISONOUS.
 WARNING. Cancer and Reproductive Harm - <https://www.p65warnings.ca.gov/>.

3. Composition/Information on Ingredients

Component	CAS-No	Weight %
Ethyl alcohol	64-17-5	86
Methyl alcohol	67-56-1	13
Methylisobutyl ketone	108-10-1	0.9
Methyl red	493-52-7	0.1

4. First-aid measures

General Advice	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.
Inhalation	Remove to fresh air. If not breathing, give artificial respiration. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.
Ingestion	Do NOT induce vomiting. Call a physician or poison control center immediately.
Most important symptoms and effects	Difficulty in breathing. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting
Notes to Physician	Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media	Carbon dioxide (CO ₂). Powder. Water spray. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion. Water mist may be used to cool closed containers.
Unsuitable Extinguishing Media	No information available
Flash Point	11 °C / 51.8 °F
Method -	No information available
Autoignition Temperature	No information available
Explosion Limits	
Upper	No data available
Lower	No data available
Sensitivity to Mechanical Impact	No information available
Sensitivity to Static Discharge	No information available

Specific Hazards Arising from the Chemical

Flammable. Containers may explode when heated. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back.

Hazardous Combustion Products

None known.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

NFPA

Health	Flammability	Instability	Physical hazards
3	3	0	-

6. Accidental release measures

Personal Precautions	Ensure adequate ventilation. Use personal protective equipment as required. Keep people
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away from and upwind of spill/leak. Evacuate personnel to safe areas. Remove all sources of ignition. Take precautionary measures against static discharges.

Environmental Precautions

Do not flush into surface water or sanitary sewer system.

Methods for Containment and Clean Up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

7. Handling and storage

Handling

Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not breathe mist/vapors/spray. Do not ingest. If swallowed then seek immediate medical assistance. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Take precautionary measures against static discharges.

Storage

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat, sparks and flame.

8. Exposure controls / personal protection

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH	Mexico OEL (TWA)
Ethyl alcohol	STEL: 1000 ppm	(Vacated) TWA: 1000 ppm (Vacated) TWA: 1900 mg/m ³ TWA: 1000 ppm TWA: 1900 mg/m ³	IDLH: 3300 ppm TWA: 1000 ppm TWA: 1900 mg/m ³	STEL: 1000 ppm
Methyl alcohol	TWA: 200 ppm STEL: 250 ppm Skin	(Vacated) TWA: 200 ppm (Vacated) TWA: 260 mg/m ³ (Vacated) STEL: 250 ppm (Vacated) STEL: 325 mg/m ³ Skin TWA: 200 ppm TWA: 260 mg/m ³	IDLH: 6000 ppm TWA: 200 ppm TWA: 260 mg/m ³ STEL: 250 ppm STEL: 325 mg/m ³	TWA: 200 ppm STEL: 250 ppm
Methylisobutyl ketone	TWA: 20 ppm STEL: 75 ppm	(Vacated) TWA: 50 ppm (Vacated) TWA: 205 mg/m ³ (Vacated) STEL: 75 ppm (Vacated) STEL: 300 mg/m ³ TWA: 100 ppm TWA: 410 mg/m ³	IDLH: 500 ppm TWA: 50 ppm TWA: 205 mg/m ³ STEL: 75 ppm STEL: 300 mg/m ³	TWA: 20 ppm STEL: 75 ppm

Legend

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH IDLH: NIOSH - National Institute for Occupational Safety and Health

Engineering Measures

Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas. Use explosion-proof electrical/ventilating/lighting/equipment.

Personal Protective Equipment**Eye/face Protection**

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 and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection

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.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Physical State	Liquid
Appearance	No information available
Odor	No information available
Odor Threshold	No information available
pH	No information available
Melting Point/Range	No data available
Boiling Point/Range	No information available
Flash Point	11 °C / 51.8 °F
Evaporation Rate	No information available
Flammability (solid,gas)	Not applicable
Flammability or explosive limits	
Upper	No data available
Lower	No data available
Vapor Pressure	No information available
Vapor Density	No information available
Specific Gravity	No information available
Solubility	No information available
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	No information available
Decomposition Temperature	No information available
Viscosity	No information available
Molecular Formula	(CH ₃) ₂ NC ₆ H ₄ N=NC ₆ H ₄ CO ₂ H
Molecular Weight	269.30

10. Stability and reactivity

Reactive Hazard	None known, based on information available
Stability	Stable under normal conditions.
Conditions to Avoid	Keep away from open flames, hot surfaces and sources of ignition.
Incompatible Materials	Oxidizing agent
Hazardous Decomposition Products	None under normal use conditions
Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions	None under normal processing.

11. Toxicological information

Acute Toxicity**Product Information****Oral LD50**

Category 4. ATE = 300 - 2000 mg/kg.

Dermal LD50

Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.

Vapor LC50

Category 3. ATE = 2 - 10 mg/l.

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Ethyl alcohol	LD50 = 10470 mg/kg OECD 401 (Rat) 3450 mg/kg (Mouse)	Not listed	LC50 = 117-125 mg/l (4h) OECD 403 (rat) 20000 ppm/10H (rat)
Methyl alcohol	LD50 > 1187 – 2769 mg/kg (Rat)	LD50 = 17100 mg/kg (Rabbit)	LC50 = 128.2 mg/L (Rat) 4 h
Methylisobutyl ketone	LD50 = 2080 mg/kg (Rat)	LD50 = 3000 mg/kg (Rabbit)	LC50 2000 - 4000 ppm (Rat) 4 h

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Toxicologically Synergistic Products No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation No information available

Sensitization No information available

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Ethyl alcohol	64-17-5	Group 1	Known	A3	X	A3
Methyl alcohol	67-56-1	Not listed	Not listed	Not listed	Not listed	Not listed
Methylisobutyl ketone	108-10-1	Group 2B	Not listed	A3	X	A3
Methyl red	493-52-7	Not listed	Not listed	Not listed	Not listed	Not listed

IARC (International Agency for Research on Cancer)

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 2A - Probably Carcinogenic to Humans

Group 2B - Possibly Carcinogenic to Humans

NTP: (National Toxicity Program)

Known - Known Carcinogen

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

A1 - Known Human Carcinogen

A2 - Suspected Human Carcinogen

A3 - Animal Carcinogen

ACGIH: (American Conference of Governmental Industrial Hygienists)

NTP: (National Toxicity Program)

ACGIH: (American Conference of Governmental Industrial Hygienists)

Mutagenic Effects No information available

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - single exposure Optic nerve Central nervous system (CNS)

STOT - repeated exposure None known

Aspiration hazard No information available

Symptoms / effects, both acute and delayed Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting

Endocrine Disruptor Information No information available

Other Adverse Effects The toxicological properties have not been fully investigated.

12. Ecological information

Ecotoxicity

Contains a substance which is: Toxic to aquatic organisms. The product contains following substances which are hazardous for the environment.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Ethyl alcohol	EC50 (72h) = 275 mg/l (Chlorella vulgaris)	Fathead minnow (Pimephales promelas) LC50 = 14200 mg/l/96h	Photobacterium phosphoreum: EC50 = 34634 mg/L/30 min Photobacterium phosphoreum: EC50 = 35470 mg/L/5 min	EC50 = 9268 mg/L/48h EC50 = 10800 mg/L/24h
Methyl alcohol	Not listed	Pimephales promelas: LC50 > 10000 mg/L 96h	EC50 = 39000 mg/L 25 min EC50 = 40000 mg/L 15 min EC50 = 43000 mg/L 5 min	EC50 > 10000 mg/L 24h

Methylisobutyl ketone	EC50: 400 mg/L/96h	LC50: 496 - 514 mg/L, 96h flow-through (Pimephales promelas)	EC50 = 79.6 mg/L 5 min	EC50: 4280.0 mg/L/24h EC50: 170 mg/L/48h EC50: 4280.0 mg/L/24h
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Persistence and Degradability Persistence is unlikely

Bioaccumulation/ Accumulation No information available.

Mobility Is not likely mobile in the environment due its low water solubility.

Component	log Pow
Ethyl alcohol	-0.32
Methyl alcohol	-0.74
Methylisobutyl ketone	1.19
Methyl red	3.83

13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

Component	RCRA - U Series Wastes	RCRA - P Series Wastes
Methyl alcohol - 67-56-1	U154	-
Methylisobutyl ketone - 108-10-1	U161	-

14. Transport information

DOT

UN-No UN1170
 Proper Shipping Name Ethanol solution
 Hazard Class 3
 Packing Group II

TDG

UN-No UN1170
 Proper Shipping Name Ethanol solution
 Hazard Class 3
 Packing Group II

IATA

UN-No UN1170
 Proper Shipping Name Ethanol solution
 Hazard Class 3
 Packing Group II

IMDG/IMO

UN-No UN1170
 Proper Shipping Name Ethanol solution
 Hazard Class 3
 Packing Group II

15. Regulatory information

United States of America Inventory

Component	CAS-No	TSCA	TSCA Inventory notification - Active/Inactive	TSCA - EPA Regulatory Flags
Ethyl alcohol	64-17-5	X	ACTIVE	-
Methyl alcohol	67-56-1	X	ACTIVE	-
Methylisobutyl ketone	108-10-1	X	ACTIVE	-
Methyl red	493-52-7	X	ACTIVE	-

Legend:

TSCA - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'- - Not Listed

TSCA 12(b) - Notices of Export Not applicable

International Inventories

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Australia (AICS), China (IECSC), Korea (ECL).

Component	CAS-No	DSL	NDSL	EINECS	PICCS	ENCS	AICS	IECSC	KECL
Ethyl alcohol	64-17-5	X	-	200-578-6	X	X	X	X	KE-13217
Methyl alcohol	67-56-1	X	-	200-659-6	X	X	X	X	KE-23193
Methylisobutyl ketone	108-10-1	X	-	203-550-1	X	X	X	X	KE-24725
Methyl red	493-52-7	X	-	207-776-1	X	-	X	X	KE-06693

U.S. Federal Regulations**SARA 313**

Component	CAS-No	Weight %	SARA 313 - Threshold Values %
Methyl alcohol	67-56-1	13	1.0
Methylisobutyl ketone	108-10-1	0.9	1.0

SARA 311/312 Hazard Categories See section 2 for more information

CWA (Clean Water Act) Not applicable

Clean Air Act

Component	HAPS Data	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Methyl alcohol	X		-
Methylisobutyl ketone	X		-

OSHA - Occupational Safety and Health Administration Not applicable

CERCLA Not applicable

Component	Hazardous Substances RQs	CERCLA EHS RQs
Methyl alcohol	5000 lb	-
Methylisobutyl ketone	5000 lb	-

California Proposition 65 This product contains the following Proposition 65 chemicals.

Component	CAS-No	California Prop. 65	Prop 65 NSRL	Category
Ethyl alcohol	64-17-5	Development (alcoholic beverages only) Carcinogen	-	Developmental Carcinogen
Methyl alcohol	67-56-1	Developmental	-	Developmental
Methylisobutyl ketone	108-10-1	Carcinogen Developmental	-	Developmental Carcinogen

U.S. State Right-to-Know Regulations

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Ethyl alcohol	X	X	X	X	X
Methyl alcohol	X	X	X	X	X
Methylisobutyl ketone	X	X	X	X	X

U.S. Department of Transportation

Reportable Quantity (RQ): N
 DOT Marine Pollutant N
 DOT Severe Marine Pollutant N

U.S. Department of Homeland Security This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade No information available

16. Other information

Prepared By Health, Safety and Environmental Department
Email: tech@alfa.com
www.alfa.com

Revision Date 24-Feb-2020

Print Date 24-Feb-2020

Revision Summary SDS authoring systems update, replaces ChemGes SDS No. 2,884.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of SDS