MEDICAL CHEMICAL CORPORATION
SINCE 1954

SDS for Eosin/Phloxine Stain
Catalog # 554A

Creation date: 04-29-2015 **Revision date: 01-11-2024** **Revision number: 1.05**

Section I - Product Identification

Product: A solution of eosin Y, phloxine B, water and acetic acid in reagent alcohol. Reagent alcohol is a mixture of ethyl alcohol, isopropanol and methanol.

Intended Uses: This product is used as a laboratory stain in histology and cytology.

Uses advised against: Not for food or drug use. Reagent alcohol is toxic and can not be made non-toxic.

Country of origin: United States.

Manufacturer Identification

Medical Chemical Corp.
19430 Van Ness Ave.
Torrance, CA 90501

Customer Service: Phone (310)787-6800
Email. Customerservice@med-chem.com
FAX (310)787-4464

Emergency Telephone Number

CHEMTREC Emergency Response Telephone Number: (800)424-9300. Note: The CHEMTREC phone number is only for emergencies involving spills, leaks, fire, exposure or accident. Please direct all other inquiries to our customer service phone number.

Section II - Hazard Identification

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

Flammable liquid: Category 2 (H225). Highly flammable liquid and vapor.
Eye damage/eye Irritation: Category 2A (H319). Causes serious eye irritation.
Acute toxicity (Oral): Category 4 (H302). Harmful if swallowed.
Acute toxicity (Inhalation): Category 4 (H332). Harmful if inhaled.
Acute toxicity (Dermal): Category 5 (H313). May be harmful in contact with skin.
Specific target organ toxicity (single exposure): (H336). May cause drowsiness or dizziness.

Signal word: Danger

Hazard statements

According to the harmonized classification and labeling required by OSHA and EU-OSHA, this substance is a highly flammable liquid and vapor, causes serious eye irritation and may cause drowsiness or dizziness. In case of skin contact immediately remove all contaminated clothing. Rinse with water or shower. In case of fire, use fire extinguishers approved for alcohol fires.

Precautionary statements

P210 Keep away from heat, sparks, open flames and 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 precautions against static discharge.
P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P264 Wash hands thoroughly after handling
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective clothes and eye protection.
P405+P235 Store in a well-ventilated place. Keep cool.

Safety Ratings

Health: Hazardous *Flammability*: Highly flammable *Reactivity*: Stable *Contact*: Slight
Recommended safety equipment: safety goggles, lab coat and proper gloves

NFPA Ratings

Health = 2. Can cause temporary incapacitation or residual injury.
Flammability = 4. Will vaporize and readily burn at normal temperatures and pressures.
Reactivity = 0. Stable.

Potential Health Effects

The toxicology of this compound has not been completely examined. It is presumed that the toxicity of this item is similar to other aliphatic alcohols. Inhalation or contact with ethanol may irritate or burn skin and eyes. Fire may produce irritating, corrosive and/or toxic gases. Vapors may cause dizziness or suffocation. Exposure to methanol vapor causes eye irritation, headache, fatigue and drowsiness. High concentrations can produce central nervous system depression and optic nerve damage. Can be absorbed through skin. Swallowing methanol may cause death or eye damage.

Inhalation: Alcohols are absorbed through the mucous membranes and will produce irritation as well as the same effects as ingestion.

Ingestion: Ingestion will produce CNS disturbance, dizziness, photophobia, headache, stupor, coma and death.

Skin contact: Alcohols are absorbed through the skin. Repeated contact causes defatting of the skin with resultant irritation and flaking.

Eye contact: May be irritating.

Chronic Exposure: Unknown.

Aggravation of preexisting conditions: Impaired kidney and liver function may be aggravated by exposure to alcohols. Preexisting eye, skin, and respiratory conditions may also be aggravated. Methanol has shown genetic toxicity in some animals.

Section III - Composition/Information on Components

Ingredients	CAS#	EC List Number	% w/w
Ethanol	64-17-5	200-578-6	66%
Isopropanol	67-63-0	200-661-7	3.7%
Methyl alcohol	67-56-1	200-659-6	3.7%
Eosin Y	15086-94-9	239-138-3	0.3%
Phloxine B	18472-87-2	240-012-5	< 0.1%
Acetic acid	64-19-7	200-580-7	0.6%

Section IV - First Aid Measures

General Advice: Contact a doctor if symptoms persist

Inhalation: Remove from source of exposure and get medical attention for any breathing difficulty.

Ingestion: Do not induce vomiting. Aspiration of alcohol into the lungs may produce death. Get immediate medical attention even if symptoms improve.

Skin Contact: In case of skin contact, remove contaminated clothing and flush with water. Wash affected area with soap and water. Get medical advice if irritation develops.

Eye Contact: In case of eye contact, flush with water for at least 15 minutes and get medical attention.

Section V - Fire Fighting Measures

Fire Extinguishing Media: Alcohol foam, carbon dioxide or dry chemical. Water is ineffective against alcohol fires but may be used to cool adjacent containers.

Specific Hazards: Risk of vapor traveling to source of ignition and flashing back. Risk of exploding containers when heated. Vapor in air may form explosion risk.

Special information: Pyrolysis will release toxic carbon monoxide, formaldehyde and methanol.

Special protective gear and precautions: Self contained breathing apparatus and protective gear recommended.

Section VI - Accidental Release Measures

Use personal protective gear, remove all sources of ignition, absorb with a suitable absorbent and dispose. Take precautions against static ignition. Should not be released into the environment.

Section VII - Handling and Storage

P403+P233+P102; Store in a well-ventilated place. Keep container tightly closed. Store away from open flames or other sources of ignition. Keep out of reach of children.

Section VIII - Exposure Control/Personal Protection

Component	ACGIH TLV	OSHA PEL	NIOSH	NIOSH IDLH
Ethanol	STEL: 1000 ppm	TWA:1000 ppm	TWA:1000 ppm	3300 ppm
Isopropanol	TWA: 200 ppm STEL: 400 ppm	TWA: 400 ppm	TWA: 400 ppm	2000 ppm
Methyl alcohol	TWA: 200 ppm(skin) STEL: 250 ppm	TWA 200 ppm (skin)	TWA 200 ppm (skin)	6000 ppm
Eosin Y	Not regulated	Not regulated	Not regulated	Not regulated
Phloxine B	Not regulated	Not regulated	Not regulated	Not regulated
Acetic Acid	25 mg/m3 TWA	25 mg/m3 TWA	25 mg/m3 TWA	50 ppm

Legend

ACGIH: American Conference of Governmental Industrial Hygienists.
OSHA*:* Occupational Safety and Health Administration.
NIOSH: National Institute for Occupational Safety and Health.
IDLH: Immediately dangerous to life or health.

Ventilation System: Local exhaust such as explosion proof chemical fume hoods are recommended. When required, Refer to the ACGIH document, "Industrial Ventilation, a Manual of Recommended Practices" for details about ventilation.

Personal Respirator: Usually not required. In case of emergency, or when exposure levels are unknown, use a positive pressure, full face piece, air supplied respirator.

Skin protection: Protective gloves are recommended as part of good laboratory practice.

Eye Protection: Laboratory safety goggles or similar products are recommended as part of good laboratory practice.

Section IX - Physical and Chemical Properties

Appearance and Odor: A clear, orange liquid with a sweet odor. It has the characteristic odor of alcohol.

Flammable Limits (for ethanol): LEL 3% UEL 19%
Flammable Limits (for methanol): LEL 6% UEL 36.5%
Flammable Limits (for isopropanol): LEL 2% UEL 12%

Flash point: 20 °C (68 °F) TCC
Boiling Point: 181 °F (83 °C)
Density: 0.856 g/ml @ 22.5 °C
Evaporation Rate (Ethanol = 1): 1
Partition coefficient (*n*-Octanol/Water): No data
Solubility: Infinitely miscible with water
Vapor density (air = 1): 1.6
Volatile organic carbon (VOC):635 g/l (5.3 lb/gal)

Auto ignition temperature: No data
Boiling point range: No data
Decomposition temperature: No data
Melting point: No data
pH: Not applicable
Vapor pressure (mm Hg): 40 @ 20 °C
Viscosity: No data

Section X - Stability and Reactivity

Stability: Stable under normal conditions.

Hazardous decomposition products: Pyrolysis will produce carbon monoxide, acetaldehyde and acetic acid as well as other organic compounds..

Hazardous polymerization: Will not occur.

Incompatibilities: Oxidizers, peroxides etc.

Conditions to avoid: Heat, flame and sources of ignition.

Section XI - Toxicological Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Ethanol	1047 mg/kg (Rat)	No data	5900 mg/m^3/6 h (Rat)
Isopropanol	>4700 mg/kg (Rat)	13,000 mg/kg (Rabbit	19,000 ppm/8h (Rat)

Methyl alcohol	5628 mg/kg (Rat)	15,800 mg/kg (Rabbit)	64,000 ppm/4h (Rat)
Eosin Y	No data	No data	No data
Phloxine B	8,400 mg/kg (Rat)	No data	No data
Acetic Acid	3,310 mg/kg (Rat)	1,110 mg/kg (Rabbit)	11.4 mg/l 4 h (Rat)

Cancer lists

Ingredient	Known Carcinogenicity?	NTP?	Anticipated?	IARC Category
Ethanol	No	No	No	None
Methanol	No	No	No	None
Isopropanol	No	No	No	3
Acetic Acid	No	No	No	None
Eosin Y	No	No	No	None

Section XII - Ecological Information

Aliphatic alcohols evaporate quickly and are not expected to bioaccumulate. The material is removed from the air by dry and liquid adsorption. The half-life for ethanol in the atmosphere is one to ten days.

Environmental Fate: Biodegradable
Soil Mobility: Unknown

Environmental Toxicity: Low.

For acetic acid

Toxicity to freshwater fish (rainbow trout):LC50 = >1000 mg/l, 96 h
Toxicity to invertebrates (water flea): EC50 = > 1000 mg/l, 48 h
Toxicity to freshwater algae (Skeletonema costatum): EC50 = 73 mg/l, 72 h

For eosin Y

Toxicity to freshwater fish: No data
Toxicity to invertebrates: No data
Toxicity to freshwater algae: No data

For ethyl alcohol

Toxicity to freshwater fish (fathead minnow):LC50 = 14200 mg/l, 96 h
Toxicity to invertebrates (water flea): EC50 = 9268 mg/l, 48 h
Toxicity to freshwater algae (Chlorella vulgaris): EC50 = 275 mg/l, 72 h

For Isopropanol

Toxicity to freshwater fish (blue gill):LC50 = 9640 mg/l, 96 h
Toxicity to invertebrates (water flea): EC50 = 1000 mg/l, 48 h
Toxicity to freshwater algae (Pseudokirchneriella subcapitata): EC50 = >1000 mg/l, 72 h

For methanol

Toxicity to freshwater fish (blue gill):LC50 = 15,400 mg/l, 96 h
Toxicity to invertebrates (water flea): EC50 = 18,260 mg/l, 96 h
Toxicity to freshwater algae (Pseudokirchneriella subcapitata): EC50 = 22,000 mg/l, 72 h

For phloxine B

Toxicity to freshwater fish (mosquito fish): LC50 = 98 mg/l, 96 h
Toxicity to invertebrates: No data
Toxicity to freshwater algae: No data

Section XIII - Disposal Considerations

Disposal at a licensed chemical disposal facility is the preferred disposal method. Local governments often restrict the amounts of alcohol and other flammable liquids that may be flushed down the drain. The usual rule is that effluent exiting the building can't be flammable but specific chemicals may also be specifically forbidden. Dispose of contents and container in accord with all applicable regulations.

Section XIV - Transportation Information

Bottles smaller than 32 Fl. Oz. are eligible to be shipped under limited quantity exemptions [49 CFR section 173.150(b)(2), 173.150(C) and IATA Y341].

DOT
Proper shipping name: Ethanol solution UN1170 *Hazard Class*: 3
Packaging Group: II *DOT Hazard Label:* Flammable liquid

IATA
Proper shipping name: Ethanol solution UN1170 *Hazard Class*: 3
Packaging Group: II *DOT Hazard Label:* Flammable liquid

IMDG
Proper shipping name: Ethanol solution UN1170 *Hazard Class*: 3
Packaging Group: II *DOT Hazard Label:* Flammable liquid EMS-No: F-E, S-D

Section XV - Regulatory Information

Chemical Inventory Status

Ingredient	TSCA	EC
Ethanol	Yes	Yes
Methanol	Yes	Yes
Isopropanol	Yes	Yes
Phloxine B	Yes	Yes
Eosin Y	Yes	Yes
Acetic Acid	Yes	Yes

Federal, State and International Regulations

	SARA 302		SARA 313		RCRA	TSCA	
Ingredient	RQ	TPQ	List	Category	261.33	8(D)	Ca. Prop 65
Ethanol	No	No	No	No	No	No	No
Isopropanol	No	No	Yes	No	No	No	No
Methanol	No	No	Yes	No	U154	No	Yes
Eosin Y	No	No	Yes	No	No	No	No
Phloxine B	No	No	Yes	No	No	No	No
Acetic Acid	No	No	Yes	No	No	No	No

Chemical Weapons Convention: No TSCA 12(b): No CDTA: Yes

SARA 311/312
Acute: Yes
Chronic: No
Fire: Yes
Pressure: No
Reactivity: No

⚠ This product contains methanol which is known to the state of California to cause birth defects or other reproductive harm. For more information go to www.P65warnings.ca.gov.

Section XVI - Other Information

This information is believed to be correct at the time of publication but is not guaranteed as such, nor does it purport to be all inclusive. Medical Chemical Corp. assumes no liability for the accuracy or completeness of the information. The user assumes all responsibility for compliance with federal, state and local laws.

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