

Material Safety Data Sheet

HARLECO® Safranin Solution



1. Product and company identification

Product name : HARLECO® Safranin Solution
Product code : 65092B
Supplier : EMD Millipore Corp.
290 Concord Rd.
Billerica, MA 01821
1-978-715-1335 Technical Service
Monday - Friday: 8:00 - 6:00 PM EST
Synonym : None.
Material uses : Other non-specified industry: IVD Reagent
Validation date : 3/14/2016.
In case of emergency : 800-424-9300 CHEMTREC (USA)
613-996-6666 CANUTEC (Canada)
24 Hours/Day: 7 Days/Week

2. Hazards identification

Emergency overview : WARNING!
CAUSES EYE IRRITATION.
MAY BE HARMFUL IF SWALLOWED.
MAY CAUSE RESPIRATORY TRACT AND SKIN IRRITATION.
CONTAINS MATERIAL WHICH MAY CAUSE DAMAGE TO THE FOLLOWING
ORGANS: BLOOD, REPRODUCTIVE SYSTEM, LIVER, RESPIRATORY TRACT, SKIN,
EYES, CENTRAL NERVOUS SYSTEM.
WARNING: This product contains less than 1% of a chemical known to the State of
California to cause birth defects or other reproductive harm.
Do not breathe vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing.
Use only with adequate ventilation. Keep container tightly closed and sealed until ready
for use. Wash thoroughly after handling.

Physical state : Liquid.

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Routes of entry : Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Inhalation : May cause respiratory irritation.

Ingestion : May be harmful if swallowed.

Skin : May cause skin irritation.

Eyes : Irritating to eyes.

Potential chronic health effects

Carcinogenicity : No known significant effects or critical hazards.
IARC classification (1) for Ethanol, CAS# 64-17-5, is intended for use in alcoholic
beverage use only. This product is NOT intended for this use.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Target organs : Contains material which may cause damage to the following organs: blood, the
reproductive system, liver, upper respiratory tract, skin, eyes, central nervous system (CNS).

Medical conditions aggravated by over-exposure : Pre-existing disorders involving any target organs mentioned in this MSDS as being at
risk may be aggravated by over-exposure to this product.

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2 . Hazards identification

See toxicological information (section 11)

3 . Composition/information on ingredients

<u>Name</u>	<u>CAS number</u>	<u>% by weight</u>
Safranin O	477-73-6	0.1 - 1
Ethyl Alcohol	64-17-5	8 - 10
Methanol	67-56-1	0.1 - 1
Water	7732-18-5	77 - 87

4 . First aid measures

- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
- Skin contact** : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
- Inhalation** : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
- Ingestion** : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

5 . Fire-fighting measures

- Flammability of the product** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Not suitable** : None known.
- Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6 . Accidental release measures

- Personal precautions** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate . Put on appropriate personal protective equipment (see Section 8).
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods for cleaning up

- Spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal . Dilute with water and mop up if water-soluble or absorb with an inert dry material and

6 . Accidental release measures

place in an appropriate waste disposal container.

7 . Handling and storage

- Handling** : Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Storage** : Store in accordance with local regulations. Store in original container, protected from direct sunlight. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

8 . Exposure controls/personal protection

Ingredient	Exposure limits
Ethanol	<p>ACGIH TLV (United States, 3/2015). STEL: 1000 ppm 15 minute(s).</p> <p>OSHA PEL 1989 (United States, 3/1989). TWA: 1900 mg/m³ 8 hour(s). TWA: 1000 ppm 8 hour(s).</p> <p>NIOSH REL (United States, 10/2013). TWA: 1000 ppm 10 hour(s). TWA: 1900 mg/m³ 10 hour(s).</p> <p>OSHA PEL (United States, 2/2013). TWA: 1000 ppm 8 hour(s). TWA: 1900 mg/m³ 8 hour(s).</p>

Consult local authorities for acceptable exposure limits.

- Engineering measures** : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Personal protection**
- Respiratory** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Hands** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Eyes** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. Recommended: splash goggles
- Skin** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Recommended: lab coat
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9 . Physical and chemical properties

Physical state	: Liquid.
Color	: Red.
Odor	: Alcohol-like. [Slight]
pH	: Not available.
Boiling/condensation point	: Not available.
Melting/freezing point	: Not available.
Relative density	: Not available.
Vapor pressure	: Not available.
Vapor density	: Not available.
Odor threshold	: Not available.
Evaporation rate	: Highest known value: 1.7 (Ethanol) Weighted average: 0.62 compared with (n-Butyl Acetate =1)
VOC	: 9.6 % (w/w)
Solubility	: Soluble in the following materials: water

10 . Stability and reactivity

Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Hazardous polymerization	: Under normal conditions of storage and use, hazardous polymerization will not occur.
Conditions to avoid	: No specific data.
Materials to avoid	: No specific data.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Conditions of reactivity	: No specific data.

11 . Toxicological information

Acute toxicity

Product/ingredient name	Test Route	Species	Result
Ethanol	LD50 Intra-arterial	Rat	11 mg/kg
	LD50 Intraperitoneal	Rat	3600 ug/kg
	LD50 Intravenous	Rat	1440 mg/kg
	LD50 Oral	Rat	7 g/kg
	LD50 Oral	Rat	15010 mg/kg
	LD50 Oral	Rat	7060 mg/kg
	LD50 Oral	Rabbit	6300 mg/kg
	LDLo Dermal	Rabbit	20000 mg/kg
	LDLo Oral	Rat	7000 mg/kg
	TDLo Intracerebral	Rat	363.6 ug/kg
	TDLo Intracerebral	Rat	106 ug/kg
	TDLo Intraperitoneal	Rat	2.45 g/kg
	TDLo Intraperitoneal	Rat	2 g/kg
	TDLo Intraperitoneal	Rat	1.5 g/kg
	TDLo Intraperitoneal	Rat	1 g/kg
	TDLo Intraperitoneal	Rat	0.5 g/kg

11 . Toxicological information

Intraperitoneal			
TDLo	Rat		0.25 g/kg
Intraperitoneal			
TDLo	Rat		3500 mg/kg
Intraperitoneal			
TDLo	Rat		3000 mg/kg
Intraperitoneal			
TDLo	Rat		2800 mg/kg
Intraperitoneal			
TDLo	Rat		2700 mg/kg
Intraperitoneal			
TDLo	Rat		2500 mg/kg
Intraperitoneal			
TDLo	Rat		2000 mg/kg
Intraperitoneal			
TDLo	Rat		1500 mg/kg
Intraperitoneal			
TDLo	Rat		1000 mg/kg
Intraperitoneal			
TDLo	Rat		500 mg/kg
Intraperitoneal			
TDLo	Rat		2.4 mg/kg
Intraperitoneal			
TDLo	Rat		1.25 mg/kg
Intraperitoneal			
TDLo Intraspinal	Rat		0.436 mL/kg
TDLo Intravenous	Rat		1 g/kg
TDLo Intravenous	Rat		0.5 g/kg
TDLo Oral	Rat		6.4 g/kg
TDLo Oral	Rat		6 g/kg
TDLo Oral	Rat		5.25 g/kg
TDLo Oral	Rat		5 g/kg
TDLo Oral	Rat		3.9 g/kg
TDLo Oral	Rat		3 g/kg
TDLo Oral	Rat		2 g/kg
TDLo Oral	Rat		1 g/kg
TDLo Oral	Rat		0.72 g/kg
TDLo Oral	Rat		0.5 g/kg
TDLo Oral	Rat		0.4 g/kg
TDLo Oral	Rat		10 mL/kg
TDLo Oral	Rat		5 mL/kg
TDLo Oral	Rat		4.8 mL/kg
TDLo Oral	Rat		4.57 mL/kg
TDLo Oral	Rat		4.44 mL/kg
TDLo Oral	Rat		4 mL/kg
TDLo Oral	Rat		2.375 mL/kg
TDLo Oral	Rat		12800 mg/kg
TDLo Oral	Rat		8000 mg/kg
TDLo Oral	Rat		6000 mg/kg
TDLo Oral	Rat		5250 mg/kg
TDLo Oral	Rat		5000 mg/kg
TDLo Oral	Rat		4800 mg/kg
TDLo Oral	Rat		4300 mg/kg
TDLo Oral	Rat		1600 mg/kg
TDLo Oral	Rat		1500 mg/kg
TDLo Oral	Rat		1000 mg/kg
TDLo	Rat		7900 mg/kg
Subcutaneous			
TDLo Unreported	Rat		3 g/kg
LC50 Inhalation	Rat		124700 mg/m3
Vapor			

11 . Toxicological information

LC50 Inhalation Vapor	Rat	5900 mg/m3
LC50 Inhalation Vapor	Rat	20000 ppm
LC50 Inhalation Gas.	Rat	20000 ppm

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Observation
Ethanol	Eyes - Mild irritant	Rabbit	-	-
	Eyes - Moderate irritant	Rabbit	-	-
	Eyes - Severe irritant	Rabbit	-	-
	Skin - Mild irritant	Rabbit	-	-
	Skin - Moderate irritant	Rabbit	-	-
	Eyes - Moderate irritant	Rabbit	-	-

Carcinogenicity

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
Ethanol	A3	1	-	-	-	-

No known significant effects or critical hazards.

IARC classification (1) for Ethanol, CAS# 64-17-5, is intended for use in alcoholic beverage use only. This product is NOT intended for this use.

Mutagenicity

No known significant effects or critical hazards.

Teratogenicity

No known significant effects or critical hazards.

12 . Ecological information

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
Ethanol	Acute EC50 12.9 g/L Fresh water	Fish - Fathead minnow - Pimephales promelas - 30 days	96 hours
	Acute EC50 1074 mg/L Fresh water	Crustaceans - Ostracod - Cypris subglobosa	48 hours
	Acute EC50 17.921 mg/L Marine water	Algae - Green algae - Ulva pertusa	96 hours
	Acute EC50 2 mg/L	Daphnia	48 hours
	Acute EC50 2000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	Acute LC50 13000 mg/L	Fish	96 hours
	Acute LC50 5680 mg/L Fresh water	Daphnia - Water flea - Daphnia magna - Neonate - <24 hours	48 hours
	Acute LC50 >100 mg/L	Daphnia	96 hours
	Acute LC50 >100 mg/L	Fish	96 hours
	Acute LC50 12720 ppm Fresh water	Fish - Fathead minnow - Pimephales promelas - 25 to 40 mm	96 hours
	Acute LC50 13480000 ug/ L Fresh water	Fish - Fathead minnow - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling) - 4 to 8 weeks - 1.1 to 3.1 cm	96 hours

12 . Ecological information

Acute LC50 11000000 ug/L Marine water	Fish - Bleak - Alburnus alburnus - 8 to 10 cm	96 hours
Acute LC50 9300000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna - <24 hours	48 hours
Acute LC50 9268000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna - Neonate	48 hours
Acute LC50 9248000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna - Neonate - <12 hours	48 hours
Acute LC50 6076000 ug/L Fresh water	Crustaceans - Water flea - Ceriodaphnia dubia - Neonate	48 hours
Acute LC50 5577000 ug/L Fresh water	Crustaceans - Water flea - Ceriodaphnia dubia - Neonate	48 hours
Acute LC50 3715000 to 4432000 ug/L Fresh water	Crustaceans - Water flea - Ceriodaphnia dubia - Neonate	48 hours
Acute LC50 42000 ug/L Fresh water	Fish - Rainbow trout, donaldson trout - Oncorhynchus mykiss	4 days
Acute LC50 25500 ug/L Marine water	Crustaceans - g2h:26vg:7pt - Artemia franciscana - Larvae	48 hours
Chronic NOEC 4.995 mg/L Marine water	Algae - Green algae - Ulva pertusa	96 hours
Chronic NOEC 2000 ppm Fresh water	Algae - Diatom - Chaetoceros calcitrans	96 hours
Chronic NOEC 350 ppm Fresh water	Algae - Algae - Heterosigma akashiwo	96 hours
Chronic NOEC 20 ppm Fresh water	Algae - Dinoflagellate - Prorocentrum minimum	96 hours
Chronic NOEC 14 ppm Fresh water	Algae - Euglenoid - Eutreptiella sp.	96 hours
Chronic NOEC 0.375 ul/L Fresh water	Fish - Eastern mosquitofish - Gambusia holbrooki - Larvae - 3 days	12 weeks

Environmental effects : No known significant effects or critical hazards.

Other adverse effects : No known significant effects or critical hazards.

13 . Disposal considerations

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

14 . Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	-	CHEMICALS, N.O.S.	-	-		Not available.

PG* : Packing group

15 . Regulatory information

United States

HCS Classification : Irritating material
Target organ effects

U.S. Federal regulations : **United States inventory (TSCA 8b):**
TSCA (Toxic Substance Control Act): This product is listed on the TSCA Inventory.
SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: Ethanol
SARA 311/312 MSDS distribution - chemical inventory - hazard identification:
Ethanol: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard
Clean Water Act (CWA) 307: No products were found.
Clean Water Act (CWA) 311: No products were found.
Clean Air Act (CAA) 112 accidental release prevention: No products were found.
Clean Air Act (CAA) 112 regulated flammable substances: No products were found.
Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 313

	<u>Product name</u>	<u>CAS number</u>	<u>Concentration</u>
Form R - Reporting requirements	: Methanol	67-56-1	1.06 - 1.96
Supplier notification	: Methanol	67-56-1	1.06 - 1.96

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

Connecticut Carcinogen Reporting : None of the components are listed.

Connecticut Hazardous Material Survey : None of the components are listed.

Florida substances : None of the components are listed.

Illinois Chemical Safety Act : None of the components are listed.

Illinois Toxic Substances Disclosure to Employee Act : None of the components are listed.

Louisiana Spill : None of the components are listed.

Louisiana Reporting : None of the components are listed.

Massachusetts Spill : None of the components are listed.

Massachusetts Substances : The following components are listed: ETHYL ALCOHOL

Minnesota Hazardous Substances : None of the components are listed.

Michigan Critical Material : None of the components are listed.

New Jersey Toxic Catastrophe Prevention Act : None of the components are listed.

New Jersey Spill : None of the components are listed.

New Jersey Hazardous Substances : The following components are listed: HARLECO® Safranin Solution

New York Toxic Chemical Release Reporting : None of the components are listed.

15 . Regulatory information

New York Acutely Hazardous Substances : None of the components are listed.

Pennsylvania RTK Hazardous Substances : The following components are listed: DENATURED ALCOHOL

Rhode Island Hazardous Substances : None of the components are listed.

California Prop. 65

WARNING: This product contains less than 1% of a chemical known to the State of California to cause birth defects or other reproductive harm.

<u>Ingredient name</u>	<u>Cancer</u>	<u>Reproductive</u>	<u>No significant risk level</u>	<u>Maximum acceptable dosage level</u>
Methanol	No.	Yes.	No.	23000 µg/day (ingestion) 47000 µg/day (inhalation)

Canada

WHMIS (Canada) : Class D-2B: Material causing other toxic effects (Toxic).
Canadian lists : **CEPA Toxic substances:** None of the components are listed.
Canadian ARET: None of the components are listed.
Canadian NPRI: The following components are listed: Ethanol
Alberta Designated Substances: None of the components are listed.
Ontario Designated Substances: None of the components are listed.
Quebec Designated Substances: None of the components are listed.

CEPA DSL / CEPA NDSL : All components are listed or exempted.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

EU regulations

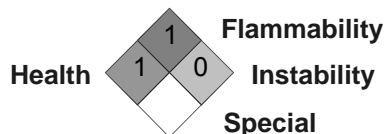
Risk phrases : This product is not classified according to EU legislation.

International regulations

International lists : **Australia inventory (AICS):** All components are listed or exempted.
China inventory (IECSC): Not determined.
Japan inventory: All components are listed or exempted.
Korea inventory: All components are listed or exempted.
New Zealand Inventory of Chemicals (NZIoC): Not determined.
Philippines inventory (PICCS): All components are listed or exempted.

16 . Other information

National Fire Protection Association (U.S.A.) :



Notice to reader

The statements contained herein are based upon technical data that EMD Millipore Corp. believes to be reliable, are offered for information purposes only and as a guide to the appropriate precautionary and emergency handling of the material by a properly trained person having the necessary technical skills. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use, storage and disposal of these materials and the safety and health of employees and customers and the protection of the environment. EMD MILLIPORE CORP. MAKES NO REPRESENTATION OR WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE, WITH RESPECT TO THE INFORMATION

16 . Other information

HEREIN OR THE PRODUCT TO WHICH THE INFORMATION REFERS.