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Manufacturer's CAGE: 1P573

Safety Data Sheet

Date Effective: May 16, 2017

SPI Catalog # 02586-AB

SPI-Chem™ Hematoxylin (Ehrlich's Solution)

Section 1.1: Identification

Chemical Name/Synonyms ..... Hematoxylin (Ehrlich's Solution), Ehrlich's Hematoxylin

Product or Trade Name ..... SPI-Chem™ Hematoxylin (Ehrlich's Solution)

Chemical Formula..... Mixture

Section 1.2: Relevant Uses/Restrictions

Laboratory Chemical.
Nuclear stain for histology and cytology.

Section 1.3: Supplier of the Safety Data Sheet

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Section 1.4: Emergency telephone number

Emergencies
Contacting CHEMTREC:

24 Hour Emergency Use Only #'s...
Worldwide phone: 1-(703)-741-5970
Toll-free phone: 1-(800)-424-9300 USA + Canada only

Section 2: Hazard Identification

2.1 Classification of the substance

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquid, category 2
Respiratory sensitizer, category 1B
Skin sensitizer, category 1B
Carcinogen, category 1A

Metal corrosive, category 1
Mutagen, category 2
STOT SE, category 2
Skin irritant, category 2
Eye irritant, category 2A
Acute toxicity, category 4 (oral)
Acute toxicity, category 4 (respiratory)

2.2 Label elements

Pictogram

Signal Word: Danger

Hazard statements:

H225 Highly flammable liquid and vapor
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled
H341 Suspected of causing genetic defects
H350 May cause cancer
H371 May cause damage to organs
H290 May be corrosive to metals
H302 Harmful if swallowed
H332 Harmful if inhaled
H315 Causes skin irritation
H319 Causes serious eye irritation
H317 May cause an allergic skin reaction

Precautionary statements:

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.
P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
P285 In case of inadequate ventilation, wear respiratory protection.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P240 Ground/ bond container and receiving equipment.
P233 Keep container tightly closed.
P242 Use only non-sparking tools.
P234 Keep only in original container
P243 Take precautionary measures against static discharge.
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing must not be allowed out of the workplace.
P303 + P361 + P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P305 + P351 + P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact Lenses, if present and easy to do. Continue rinsing.
P341 + P311 If experiencing respiratory symptoms: Call a POISON CENTER/ doctor.

P301 + P312 IF SWALLOWED: Call a POISON CENTER / doctor if you feel unwell.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P363 Wash contaminated clothing before reuse.
P308 + P313 If exposed or concerned: Get medical advice/ attention.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P330 Rinse mouth.
P370 + P378 In case of fire: Use for extinction: CO2, powder or water spray.
P391 Collect spillage. Absorb spillage prevent material damage.
P362 Take off contaminated clothing and wash it before reuse.
P405 Store locked up.
P406 Store in corrosive resistant container with a resistant inner liner.
P403 + P235 Store in a well-ventilated place. Keep cool.
P501 Dispose of contents/ container in accordance with local/ regional/ national/ international regulations.

2.3 Other Hazards:

Results of PBT and vPvB assessment:

PBT: Not applicable.

vPvB: Not applicable.

Hazardous Material Information System USA

Health 2
Fire Hazard 3
Reactivity 0
Personal Protection .....

NFPA Rating (estimated)

Health 2
Flammability..... 3
Reactivity 0

Section 3: Composition

3.1 Substances: Not applicable.

3.2 Mixtures:

Dangerous components:

Substance	CAS Number	Percentage	EC Number
Glycerol	56-81-5	25-50 %	200-289-5
Ethyl alcohol, denatured	64-17-5	25-50 %	200-578-6
Acetic Acid Glacial	64-19-7	2.5-10 %	200-580-7
Methyl Alcohol	67-56-1	<=2.5 %	200-659-6

Section 4: First Aid Measures

4.1 Description of first aid measures:

General Information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Inhalation:

Supply fresh air and to be sure call for a doctor.
In case of unconsciousness, place patient stably in side position for transportation.

Skin Contact:
Immediately wash with water and soap and rinse thoroughly.

Eye Contact:
Rinse opened eye for several minutes under running water.
If symptoms persist, consult a doctor.

Ingestion:
Immediately call a doctor.

Self-protection of the first aider:
No further relevant information available.

Information for doctor:
No further relevant information available.

4.2 Most important symptoms and effects, both acute and delayed
No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed
No further relevant information available.

Section 5: Fire Fighting Measures

5.1 Extinguishing media

CO_2, extinguishing powder, or water spray.

Fight larger fires with water spray or alcohol resistant foam.

5.2 Special hazards arising from the substance or mixture

No further relevant information available.

5.3 Advice for firefighters

Special protective equipment – Mouth respiratory protective device.

Section 6: Accidental Release Measures

6.1 Personal precautions
Wear personal protective equipment.
Keep unprotected persons away.

6.2 Environmental precautions
Inform respective authorities in case of seepage into water course or sewage system.
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.

6.3 Methods and material for containment and cleaning up
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to Section 13.
Ensure adequate ventilation.

6.4 Reference to other sections
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

Proactive Action Criteria (PAC) for chemicals:

PAC-1 MILD, TRANSIENT HEALTH EFFECTS

56-81-5	Glycerol	45 mg/m^3
64-17-5	Ethyl Alcohol, denatured	1,800 ppm
64-19-7	Acetic Acid Glacial	5 ppm
67-56-1	Methyl Alcohol	530 ppm
7681-55-2	Sodium iodate	0.83 mg/m^3

PAC-2 IRREVERSIBLE OR OTHER SERIOUS HEALTH EFFECTS

56-81-5	Glycerol	180 mg/m^3
64-17-5	Ethyl Alcohol, denatured	1,800 ppm
64-19-7	Acetic Acid Glacial	35 ppm
67-56-1	Methyl Alcohol	2,100 ppm
7681-55-2	Sodium iodate	9.1 mg/m^3

PAC-3 LIFE-THREATENING HEALTH EFFECTS

56-81-5	Glycerol	1,100 mg/m^3
64-17-5	Ethyl Alcohol, denatured	15,000 ppm
64-19-7	Acetic Acid Glacial	250 ppm
67-56-1	Methyl Alcohol	7200 ppm
7681-55-2	Sodium iodate	55 mg/m^3

Section 7: Handling and Storage

7.1 Precautions for safe handling:

Ensure good ventilation/ exhaustion at the workplace.
Prevent formation of aerosols.

Information about protection against explosions and fires:

Keep ignition sources away – Do not smoke.
Protect from heat.
Protect against electrostatic charges.

7.2 Conditions for safe storage, including any incompatibilities:

Requirements to be met by storerooms and receptacles:
Store in a cool location.
Information about storage in one common storage facility:
Not required.
Further information about storage conditions:
Keep receptacle tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
Protect from heat and direct sunlight.

7.3 Specific end uses:

Laboratory Chemical.
Nuclear stain for histology and cytology.
This material is not being offered for clinical or diagnostic applications, agricultural uses or for human or animal consumption.

Section 8: Exposure Controls and Personal Protection

8.1 Control parameter and Personal Protection

Workplace exposure limits for components that require monitoring at the workplace:

56-81-5 Glycerol (mist)
- PEL Long-term value:
  - 15 mg/m^3 – total dust
  - 5 mg/m^3– respirable fraction
- TLV Withdrawn – insufficient data human occupational experience

64-17-5 Ethyl alcohol, denatured
- PEL Long-term value: 1900 mg/m^3; 1000 ppm
- REL Long-term value: 1900 mg/m^3; 1000 ppm
- TLV Short-term value: 1880 mg/m^3; 1000 ppm

64-19-7 Acetic acid glacial
- PEL Long-term value: 25 mg/m^3; 10 ppm
- REL Short-term value: 37 mg/m^3; 15 ppm
  Long-term value: 25 mg/m^3; 10 ppm
- TLV Short-term value: 37 mg/m^3; 15 ppm
  Long-term value: 25 mg/m^3; 10 ppm

67-56-1 Methyl alcohol
- PEL Long-term value: 260 mg/m^3; 200 ppm
- REL Short-term value: 325 mg/m^3; 250 ppm
  Long-term value: 260 mg/m^3; 200 ppm
  Skin: BEI

Biological limit values

67-56-1 Methyl alcohol
- Medium: urine
- Time: end of shift
- Parameter: Methanol (background, nonspecific)

8.2 Exposure controls

Personal protective equipment:

General protective and hygienic measures:
- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing.
- Wash hands before breaks and at the end of work.
- Avoid contact with the eyes and skin.

Breathing equipment:
- In case of brief exposure or low pollution use respiratory filter device.
- In case of intensive or longer exposure use respiratory protective device that is independent of circulation air.

Protection of hands:
- Protective gloves.
- The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
- Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
- Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Material of Gloves:

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation

of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material:

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:

Tightly sealed goggles.

Section 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance: Dark brown solution

Odor: Alcohol-like

Odor threshold: Not determined

pH: Not determined

Melting point/Freezing point: Undetermined

Boiling point/Boiling point range: 78 °C (172 °F)

Flash Point 17 °C (63 °F)

Evaporation rate: Not determined

Flammability (solid, gas): Not flammable

Upper/lower flammability or explosive limits

Lower: 0.9 Vol %

Upper: 15.0 Vol %

Vapor Pressure at 20 °C (68 °F): 59 hPa (44 mm Hg)

Vapor density: Not determined

Relative density: Not determined

Solubility in / Miscibility with Water: Fully miscible

Partition coefficient (n-octanol/water): Not determined

Ignition temperature: 400 °C (752 °F)

Decomposition temperature: Not determined

Viscosity

Dynamic: Not determined

Kinematic: Not determined

Explosive properties:

Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

Solvent content:

Organic solvents: 66.0 %

VOC content: 33.8 %

338.0 g/l 2.82 lb. /gal

9.2 Other information: No further relevant information available.

Section 10: Stability and Reactivity

10.1 Reactivity: No further relevant information available.

10.2 Chemical Stability

Thermal decomposition: No decomposition if used according to specifications.

10.3 Possibility of Hazardous Reactions: No dangerous reactions known:

10.4 Conditions to avoid: No further relevant information available.

10.5 Incompatible materials: No further relevant information available.

10.6 Hazardous decomposition products: No dangerous decomposition products known.

Section 11: Toxicological Information

Information on the likely routes of exposure

11.1 Information on toxicological effects

a. acute toxicity

LD/LC50 values that are relevant for classification:

67-56-1 Methyl alcohol

LD50	Oral	5628 mg/kg (rat)
LD50	Dermal	15800 mg/kg (rabbit)

b. skin corrosion/irritation:

Irritant to skin and mucous membranes.

c. serious eye damage/irritation:

Irritating effect.

d. respiratory of skin sensitization:

Sensitization possible through inhalation.
Sensitization possible through skin contact.

Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:

Harmful
Irritant

e. germ cell mutagenicity

No further relevant information available.

f. carcinogenic categories:

IARC (International Agency for Research on Cancer):

64-17-5 Ethyl Alcohol, denatured I

NTP (National Toxicology Program):

None of the ingredients is listed.

OSHA-Ca (Occupational Safety Health Administration):

None of the ingredients is listed.

g. reproductive toxicity

No further relevant information available.

h. STOT-single exposure

No further relevant information available.

i..STOT-repeated exposure

No further relevant information available.

j. aspiration hazard

No further relevant information available.

Section 12: Ecological Information

12.1 Toxicity

Aquatic toxicity: No further relevant information available.

12.2 Persistence and degradability

No further relevant information available.

12.3 Bio-accumulative potential

No further relevant information available.

12.4 Mobility in soil

No further relevant information available.

Ecotoxical effects:

Remarks: Very toxic for fish.

Additional ecological information:

General notes:

Water hazard class 1 (Self-assessment): slightly hazardous for water.

Do not allow undiluted product or large quantities of it to reach ground water, water course, or sewage system.

Also poisonous for fish and plankton in water bodies.

Very toxic for aquatic organisms.

12.5 Results of PBT and vPvB assessment

PBT: Not applicable

vPvB: Not applicable

12.6 Other adverse effects

No further relevant information available.

Section 13: Disposal Considerations

13.1 Waste treatment methods

Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Uncleaned Packagings:
Recommendation: disposal must be made according to official regulations.
Recommended cleansing agent: Water, if necessary with cleansing agents.

Section 14: Transport Information

DOT:

UN Number: UN1987
Proper shipping name: Alcohols, n.o.s. (Ethanol, Methanol)

Class: 3 Flammable liquids
Label: 3
Packing Group: II

IATA

UN Number: UN1987
Proper shipping name: ALCOHOLS, N.O.S. (ETHANOL, METHANOL)

Class: 3 Flammable liquids
Label: 3
Packing Group: II

Special precautions for user: Warning: Flammable liquids
Danger code (Kemler): 33
EMS Number: F-E,S-D
Stowage Category B

Transport limitations:

DOT:

Passenger aircraft / rail: 5 Liters
On cargo aircraft only: 60 Liters

Section 15: Regulatory Information

15.1 Safety, health and environmental regulations/ legislation specific for the substance or mixture

TSCA

The following components are listed on the TSCA Inventory:

56-81-5	Glycerol
64-17-5	Ethyl alcohol, denatured
64-19-7	Acetic acid glacial
67-56-1	Methyl alcohol
517-28-2	Haematoxylin
7681-55-2	Sodium iodide

SARA Section 313 (Specific toxic chemical listings):

67-56-1 Methyl alcohol

SARA Section 355 (extremely hazardous substances):

None of the ingredients is listed

California Prop. 65:

Chemicals known to cause cancer: None of the ingredients is listed.
Chemicals known to cause reproductive toxicity for females: None of the ingredients is listed.
Chemicals known to cause reproductive toxicity for males: None of the ingredients is listed.
Chemicals known to cause developmental toxicity:

64-17-5	Ethyl alcohol, denatured
67-56-1	Methyl alcohol

Carcinogenic categories:

EPA (Environmental Protection Agency): None of the ingredients is listed.
NIOSH-Ca (National Institute for Occupational Safety and Health): None of the ingredients is listed.

TLV (Threshold Limit Value established by ACGIH)

64-17-5	Ethyl Alcohol, denatured	A3

15.2 Chemical Safety Assessment: A Chemical Safety Assessment has not been carried out.

Date of Preparation: May 16, 2017.

Abbreviations and acronyms

IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
CMRG: Chemical Manufacturer's Recommended Guidelines
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
AIHA: American Industrial Hygiene Association
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bio-accumulative and Toxicological
vPvB: very Persistent and very Bio-accumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
STEL: Short Term Exposure Limit
CEIL: Ceiling

Section 16: Other Information

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