

Material Safety Data Sheet

Leukostat Fixative

Section 1 - Chemical Product and Company Identification

MSDS Name:

Leukostat Fixative

Catalog Numbers:

CS430A

Synonyms:

None

Company Identification:Fisher Scientific, Fairlawn
Fairlawn, NJ 07410**Company Phone Number:**

(201) 796-7100

Emergency Phone Number:

(201) 796-7100

CHEMTREC Phone Number, US:

(800) 424-9300

CHEMTREC Phone Number, US:

(202) 483-7616

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name:	Percent	EINECS/ELINCS
67-56-1	Methyl alcohol	>99	200-659-6
569-64-2	Malachite green	<1.0	209-322-8

Hazard Symbols:

Risk Phrases: 11 23/25

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: Liquid.

Danger! Poison! Flammable liquid. Harmful if inhaled. May be fatal or cause blindness if swallowed. Causes eye and skin irritation. May cause respiratory and digestive tract irritation. May be absorbed through the skin. May cause kidney damage. May cause cardiac disturbances. May cause central nervous system depression. This substance has caused adverse reproductive and fetal effects in animals. Cannot be made non-poisonous. Flash Point: 52°F.

Target Organs: kidneys, central nervous system, liver, cardiovascular system, eyes.

Potential Health Effects

Eye:

Causes moderate eye irritation. Vapors may cause eye irritation. May cause painful sensitization to light. This product contains a cationic dye. Similar dyes have caused permanent injury to the cornea and conjunctiva in documented exposure cases with human or rabbit eyes.

Skin:

May cause skin irritation. May be absorbed through the skin in harmful amounts.

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Ingestion:

May cause irritation of the digestive tract. May cause respiratory failure. May cause vascular collapse and damage. May cause kidney failure.

Inhalation:

May cause respiratory tract irritation. May cause liver and kidney damage. May cause adverse central nervous system effects including headache, convulsions, and possible death. May cause visual impairment and possible permanent blindness. May cause effects similar to those described for ingestion.

Chronic:

Prolonged or repeated skin contact may cause dermatitis. Chronic inhalation and ingestion may cause effects similar to those of acute inhalation and ingestion.

Section 4 - First Aid Measures

Eyes:

Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. Get medical aid immediately. Do NOT allow victim to rub or keep eyes closed.

Skin:

Flush skin with plenty of soap and 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. Induce vomiting by giving one teaspoon of Syrup of Ipecac.

Inhalation:

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

Notes to Physician:

Symptoms may be delayed. Metabolism of methanol can be prevented by the administration of ethanol by qualified medical personnel.

Antidote:

No specific antidote exists.

Section 5 - Fire Fighting Measures

General Information:

Containers can build up pressure if exposed to heat and/or fire. 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. Can release vapors that form explosive mixtures at temperatures above the flashpoint.

Extinguishing Media:

For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. Use water spray to cool fire-exposed containers. Water may be ineffective.

Autoignition Temperature:

867°F (463.89°C)

Flash Point:

52°F (11.11°C)

NFPA Rating:

Not published.

Explosion Limits:

Lower: 6.0 Upper: 36.0

Section 6 - Accidental Release Measures

General Information:

Use proper personal protective equipment as indicated in Section 8.

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Spills/Leaks:

Scoop up with a nonsparking tool, then place into a suitable container for disposal. Use water spray to disperse the gas/vapor. Remove all sources of ignition. Absorb spill using an absorbent, non-combustible material such as earth, sand, or vermiculite.

Section 7 - Handling and Storage

Handling:

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, sparks or open flames. Do not get on skin or in eyes. Do not ingest or inhale.

Storage:

Keep away from sources of ignition. Store in a cool, dry, well-ventilated area away from incompatible substances.

Storage Code:

Red

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

Chemical Name:	ACGIH	NIOSH	OSHA
Methyl alcohol	200 ppm TWA; 262 mg/m ³ TWA; 250 ppm STEL; 328 mg/m ³ STEL; skin - potential for cutaneous absorption	200 ppm TWA; 260 mg/m ³ TWA; 250 ppm STEL; 325 mg/m ³ STEL	200 ppm TWA; 260 mg/m ³ TWA;
Malachite green	None listed.	None listed.	None listed.

OSHA Vacated PELs

Methyl alcohol: 200 ppm TWA; 260 mg/m³ TWA

Methyl alcohol: 200 ppm TWA; 260 mg/m³ TWA

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.

Skin:

Wear appropriate protective gloves and clothing to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

Follow the OSHA respirator regulations found in 29CFR 1910.134. Always use a NIOSH-approved respirator when necessary.

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Appearance: Liquid.

Odor: Slight alcohol-like

pH: No information available.

Vapor Pressure: No information available.

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Vapor Density: No information available.
Evaporation Rate: No information available.
Viscosity: No information available.
Boiling Point: No information available.
Freezing/Melting Point: No information available.
Decomposition Temperature: No information available.
Solubility: Soluble in water.
Specific Gravity/Density: No information available.
Molecular Formula: Mixture
Molecular Weight: No information available.

Section 10 - Stability and Reactivity**Chemical Stability:**

Stable at room temperature in closed containers under normal storage and handling conditions.

Conditions to Avoid:

High temperatures, incompatible materials, ignition sources.

Incompatibilities with Other Materials

Oxidants (such as barium perchlorate, bromine, chlorine, hydrogen peroxide, lead perchlorate, perchloric acid, sodium hypochlorite). Active metals (such as potassium and magnesium). Substance is also incompatible with specific chemicals including: acetyl bromide, alkyl aluminum salts, beryllium dihydride, carbon tetrachloride + metals, chloroform + heat, chloroform + sodium hydroxide, cyanuric chloride, diethyl zinc, nitric acid, and potassium tertbutoxide. Please refer to the NFPA Fire Protection Guide for all specifics.

Hazardous Decomposition Products

Carbon monoxide, carbon dioxide, formaldehyde.

Hazardous Polymerization

Has not been reported.

Section 11 - Toxicological Information**RTECS:**

CAS# 67-56-1: PC1400000.

CAS# 569-64-2: BQ1180000.

LD50/LC50:

CAS# 67-56-1: Inhalation, rat: LC50 = 64000 ppm/4H

Oral, mouse: LD50 = 7300 mg/kg

Oral, rabbit: LD50 = 14200 mg/kg

Oral, rat: LD50 = 5628 mg/kg

Skin, rabbit: LD50 = 15800 mg/kg.

CAS# 569-64-2: Oral, mouse: LD50 = 80 mg/kg.

Carcinogenicity:

CAS# 67-56-1: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

CAS# 569-64-2: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

Epidemiology:

No information available.

Teratogenicity:

MeOH effects on Newborn: behavioral, orl-rat TDLo=7500 mg/kg. Embryo or Fetus: fetotoxicity, TCLo=10000 ppm/7H Specific Developmental Abnormalities: cardiovascular, musculoskeletal, urogenital, TCLo=20000 ppm/7H

Reproductive:

MeOH paternal Effects: spermatogenesis, ipr-mouse TDLo=5 g/kg.

Mutagenicity

MeOH DNA Damage: orl-rat 10 umol/kg. DNA Inhibition: human lymphocyte 300 mmol/L. Microbial Mutation w/o S9: *S. cerevisiae* 12 pph.

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Neurotoxicity

No information available.

Section 12 - Ecological Information

Ecotoxicity:

MeOH: Goldfish (fresh water), 250 ppm/11H, death. Aquatic toxicity rating: TLm 96 >1000 ppm.

Environmental:

No information reported.

Physical:

No information available.

Other:

None.

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

RCRA D-Maximum Concentration of Contaminants

None of the components are on this list.

RCRA D Series - Chronic Toxicity Reference Levels

None of the components are on this list.

RCRA F Series Wastes

CAS# 67-56-1 (listed as F003-HAZARDOUS WASTES): Ignitable waste.

RCRA P Series Wastes

None of the components are on this list.

RCRA U Series Wastes

CAS# 67-56-1: waste number U154 (Ignitable waste).

RCRA Substances Banned from Land Disposal

CAS# 67-56-1 is banned from land disposal according to RCRA.

Section 14 - Transport Information

	US DOT	IATA	IMO	RID/ADR	Canadian TDG
Shipping Name:		No information available.	No information available.	No information available.	No information available.
Hazard Class:					
UN Number:					
Packing Group:					

Section 15 - Regulatory Information

US Federal**TSCA**

CAS# 67-56-1 is listed on the TSCA Inventory.

CAS# 569-64-2 is listed on the TSCA Inventory.

Health and Safety Reporting List

None of the components are on this list.

Chemical Test Rules

None of the components are on this list.

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TSCA Section 12b

None of the components are on this list.

TSCA Significant New Use Rule (SNUR)

None of the components are on this list.

CERCLA/SARA Reportable Quantities (RQ)

CAS# 67-56-1: final RQ = 5000 pounds (2270 kg)

CERCLA/SARA Threshold Planning Quantities (TPQ)

None of the components are on this list.

SARA Codes

CAS# 67-56-1: acute, flammable.

CAS# 569-64-2: acute.

CERCLA/SARA Section 313

This material contains Methyl alcohol (CAS# 67-56-1, >99%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

This material contains Malachite green (CAS# 569-64-2, <1.0%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

Clean Air Act - Hazardous Air Pollutants (HAPs)

CAS# 67-56-1 is listed as a hazardous air pollutant (HAP).

Clean Air Act - Class 1 Ozone Depletors

None of the components are on this list.

Clean Air Act - Class 2 Ozone Depletors

None of the components are on this list.

Clean Water Act - Hazardous Substances

None of the components are on this list.

Clean Water Act - Priority Pollutants

None of the components are on this list.

Clean Water Act - Toxic Pollutants

None of the components are on this list.

OSHA - Highly Hazardous

None of the components are on this list.

US State**State Right to Know**

Methyl alcohol can be found on the following state Right-to-Know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

Malachite green can be found on the following state Right-to-Know lists: New Jersey, Pennsylvania, Massachusetts.

California Regulations

No information available.

No information available.

European/International Regulations**European Labelling in Accordance with EC Directives:**

Hazard Symbols:

Risk Phrases: R 11 Highly flammable.

R 23/25 Toxic by inhalation and if swallowed.

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

S 2 Keep out of reach of children.

S 24 Avoid contact with skin.

S 7 Keep container tightly closed.

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Exposure Limits

CAS# 67-56-1: OEL-ARAB Republic of Egypt:TWA 200 ppm (260 mg/m³);Skin
 OEL-AUSTRALIA:TWA 200 ppm (260 mg/m³);STEL 250 ppm;Skin
 OEL-BELGIUM:TWA 200 ppm (262 mg/m³);STEL 250 ppm;Skin
 OEL-CZECHOSLOVAKIA:TWA 100 mg/m³;STEL 500 mg/m³
 OEL-DENMARK:TWA 200 ppm (260 mg/m³);Skin
 OEL-FINLAND:TWA 200 ppm (260 mg/m³);STEL 250 ppm;Skin
 OEL-FRANCE:TWA 200 ppm (260 mg/m³);STEL 1000 ppm (1300 mg/m³)
 OEL-GERMANY:TWA 200 ppm (260 mg/m³);Skin
 OEL-HUNGARY:TWA 50 mg/m³;STEL 100 mg/m³;Skin JAN9
 OEL-JAPAN:TWA 200 ppm (260 mg/m³);Skin
 OEL-THE NETHERLANDS:TWA 200 ppm (260 mg/m³);Skin
 OEL-THE PHILIPPINES:TWA 200 ppm (260 mg/m³)
 OEL-POLAND:TWA 100 mg/m³
 OEL-RUSSIA:TWA 200 ppm;STEL 5 mg/m³;Skin
 OEL-SWEDEN:TWA 200 ppm (250 mg/m³);STEL 250 ppm (350 mg/m³);Skin
 OEL-SWITZERLAND:TWA 200 ppm (260 mg/m³);STEL 400 ppm;Skin
 OEL-THAILAND:TWA 200 ppm (260 mg/m³)
 OEL-TURKEY:TWA 200 ppm (260 mg/m³)
 OEL-UNITED KINGDOM:TWA 200 ppm (260 mg/m³);STEL 250 ppm;Skin
 OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV

Section 16 - Other Information

Added NFPA codes to Section 5. Added SARA classifications to Section 15.
 Section 3, Emer Overview, added "POISON!..".
 Section 3, Emer Overview, added "CANNOT BE MADE NON-POISONOUS...".
 Section 3, Emer Overview, added "CAUSES EYE AND SKIN IRRITATION...".
 Section 3, Emer Overview, added "MAY CAUSE RESPIRATORY AND DIGESTIVE..".
 Section 3, Emer Overview, added "MAY BE ABSORBED THROUGH THE SKIN...".
 Section 3, Emer Overview, added "MAY CAUSE KIDNEY DAMAGE...".
 Section 3, Emer Overview, added "MAY CAUSE CARDIAC DISTURBANCES...".
 Section 3, Emer Overview, added "THIS SUBSTANCE HAS CAUSED ADVERSE R..".
 Section 3, Emer Overview, added "DANGER!..".
 Section 3, Emer Overview, added "FLAMMABLE LIQUID...".
 Section 3, Emer Overview, added "HARMFUL IF INHALED...".
 Section 3, Emer Overview, added "MAY BE FATAL OR CAUSE BLINDNESS IF..".
 Section 3, Emer Overview, added "MAY CAUSE CENTRAL NERVOUS SYSTEM DE..".
 Section 3, Eye Effects, added "Causes moderate eye irritation...".
 Section 3, Eye Effects, added "Vapors may cause eye irritation...".
 Section 3, Eye Effects, added "May cause painful sensitization to..".
 Section 3, Eye Effects, added "This product contains a cationic dy..".
 Section 3, Skin Effects, added "May cause skin irritation...".
 Section 3, Skin Effects, added "May be absorbed through the skin in..".
 Section 3, Inhalation Effects, added "May cause respiratory tract irritat..".
 Section 3, Inhalation Effects, added "May cause adverse central nervous s..".
 Section 3, Inhalation Effects, added "May cause visual impairment

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and pos..".
Section 3, Inhalation Effects, added "May cause effects similar to those..".
Section 3, Inhalation Effects, added "May cause liver and kidney damage...".
Section 3, Ingestion Effects, added "May cause irritation of the digesti..".
Section 3, Ingestion Effects, added "May cause respiratory failure...".
Section 3, Ingestion Effects, added "May cause vascular collapse and dam..".
Section 3, Ingestion Effects, added "May cause kidney failure...".
Section 3, Chronic Effects, added "Prolonged or repeated skin contact..".
Section 3, Chronic Effects, added "Chronic inhalation and ingestion ma..".
Section 4, Eye First Aid, added "Flush eyes with plenty of water for..".
Section 4, Eye First Aid, added "Get medical aid immediately...". Section 4, Eye First Aid, added "Do NOT allow victim to rub or keep..".
Section 4, Skin First Aid, added "Flush skin with plenty of soap and..".
Section 4, Skin First Aid, added "Get medical aid if irritation devel..".
Section 4, Inhalation First Aid, added "Get medical aid immediately...".
Section 4, Inhalation First Aid, added "Remove from exposure to fresh air i..".
Section 4, Inhalation First Aid, added "If not breathing, give artificial r..".
Section 4, Inhalation First Aid, added "If breathing is difficult, give oxy..".
Section 4, Ingestion First Aid, added "If victim is conscious and alert, g..".
Section 4, Ingestion First Aid, added "Get medical aid immediately...".
Section 4, Ingestion First Aid, added "Induce vomiting by giving one teasp..".
Section 5, Extinguishing Media, added "For small fires, use dry chemical,..".
Section 5, Extinguishing Media, added "Use water spray to cool fire-expose..".
Section 5, Extinguishing Media, added "Water may be ineffective...".
Section 5, General Firefighting, added "Containers can build up pressure if..".
Section 5, General Firefighting, added "As in any fire, wear a self-contain..".
Section 5, General Firefighting, added "Vapors can travel to a source of ig..".
Section 5, General Firefighting, added "During a fire, irritating and highl..".
Section 5, General Firefighting, added "Flammable Liquid. Can release vapor..".
Section 6, Spills/Leaks, added "Scoop up with a nonsparking tool, t..".
Section 6, Spills/Leaks, added "Use water spray to disperse the gas..".
Section 6,

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Spills/Leaks, added "Remove all sources of ignition...". Section
6, Spills/Leaks, added "Absorb spill using an absorbent, no..".
Section

MSDS Creation Date: January 29, 1996

Revision Date: March 4, 1996

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