

Material Safety Data Sheet

Hema 3 Fixative

ACC# 89551

Section 1 - Chemical Product and Company Identification

MSDS Name: Hema 3 Fixative**Catalog Numbers:** 11985, 22122911A, 2300577, 23122929, 23123869A, 55851A**Synonyms:** Carbinol; methanol; methyl hydroxide; monohydroxymethane; pyroxylic spirit; wood alcohol; wood naptha; wood spirit.**Company Identification:**

Fisher Diagnostics
 Fisher Scientific Company, LLC
 8365 Valley Pike
 Middletown, VA 22645-0307

For information, call: 800-524-0294**Emergency Number:** 800-524-0294**For CHEMTREC assistance, call:** 800-424-9300**For International CHEMTREC assistance, call:** 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
67-56-1	Methanol	>99	200-659-6
2353-45-9	Fast green	<1.0	219-091-5

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: clear light green liquid. Flash Point: 54 deg F.

Danger! Poison! **Flammable liquid and vapor.** Harmful if inhaled. May be fatal or cause blindness if swallowed. Causes eye and skin irritation. May be absorbed through intact skin. May cause respiratory and digestive tract irritation. May cause central nervous system depression. May cause kidney damage. Cannot be made non-poisonous. This substance has caused adverse reproductive and fetal effects in animals.

Target Organs: Kidneys, central nervous system, liver, eyes.**Potential Health Effects****Eye:** Causes moderate eye irritation. Vapors may cause eye irritation. May cause painful sensitization to light.**Skin:** May cause skin irritation. May be absorbed through the skin in harmful amounts.**Ingestion:** May cause irritation of the digestive tract. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure. 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 eyelids. Get medical aid immediately. Do NOT allow victim to rub eyes or keep eyes closed.

Skin: Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.

Ingestion: Call a poison control center. If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.

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

Notes to Physician: Effects may be delayed. Ethanol may inhibit methanol metabolism.

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 may form an explosive mixture with air. 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. Use water spray to keep fire-exposed containers cool. Containers may explode in the heat of a fire. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas.

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. For large fires, use water spray, fog or alcohol-resistant foam. Cool containers with flooding quantities of water until well after fire is out.

Flash Point: 54e deg F (12.22 deg C)

Autoignition Temperature: Not applicable.

Explosion Limits, Lower:6.0

Upper: 36.5

NFPA Rating: (estimated) Health: 1; Flammability: 3; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: 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. Do not use combustible materials such as sawdust. A vapor suppressing foam may be used to reduce vapors.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Ground and bond containers when transferring material. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Keep away from heat, sparks and flame. Do not get on skin or in eyes. Do not ingest or inhale. Use only in a chemical fume hood. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

Storage: Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. Use only under a chemical fume hood.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Methanol	200 ppm TWA; 250 ppm STEL; skin - potential for cutaneous absorption	200 ppm TWA; 260 mg/m ³ TWA 6000 ppm IDLH	200 ppm TWA; 260 mg/m ³ TWA
Fast green	none listed	none listed	none listed

OSHA Vacated PELs: Methanol: 200 ppm TWA; 260 mg/m³ TWA Fast green: No OSHA Vacated PELs are listed for this chemical.

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 or European Standard EN166.

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 29 CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Appearance: clear light green

Odor: pungent odor

pH: Not available.

Vapor Pressure: 96 mm Hg

Vapor Density: 1.1 (Air=1)

Evaporation Rate: 5.2 (Ether=1)

Viscosity: 0.55 cP 20 deg C

Boiling Point: 64.7 deg C @ 760.00mm Hg

Freezing/Melting Point: -98 deg C

Decomposition Temperature: Not available.

Solubility: Soluble.

Specific Gravity/Density: .7910g/cm³

Molecular Formula:CH4O

Molecular Weight:32.04

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

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# 2353-45-9: BQ4425000

LD50/LC50:

CAS# 67-56-1:

Draize test, rabbit, eye: 40 mg Moderate;

Draize test, rabbit, eye: 100 mg/24H Moderate;

Draize test, rabbit, skin: 20 mg/24H Moderate;

Inhalation, rabbit: LC50 = 81000 mg/m³/14H;

Inhalation, rat: LC50 = 64000 ppm/4H;

Oral, mouse: LD50 = 7300 mg/kg;

Oral, rabbit: LD50 = 14200 mg/kg;

Oral, rat: LD50 = 5600 mg/kg;

Skin, rabbit: LD50 = 15800 mg/kg;

CAS# 2353-45-9:

Oral, rat: LD50 = >2 gm/kg;

Carcinogenicity:

CAS# 67-56-1: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 2353-45-9: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information available.

Teratogenicity: 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 Effects: Paternal Effects: spermatogenesis, ipr-mouse TDLo=5 g/kg.

Neurotoxicity: No information available.

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

Other Studies: None.

Section 12 - Ecological Information

Ecotoxicity: No data available. 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

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

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

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	METHANOL SOLUTION	METHANOL
Hazard Class:	3	3(6.1)
UN Number:	UN1230	UN1230
Packing Group:	II	II
Additional Info:		FLASHPOINT 12C

Section 15 - Regulatory Information

US FEDERAL

TSCA

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

CAS# 2353-45-9 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

SARA

CERCLA Hazardous Substances and corresponding RQs

CAS# 67-56-1: 5000 lb final RQ; 2270 kg final RQ

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 67-56-1: acute, flammable. CAS # 2353-45-9: chronic.

Section 313

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

Clean Air Act:

CAS# 67-56-1 is listed as a hazardous air pollutant (HAP). This material does not contain any Class 1 Ozone depleters. This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 67-56-1 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

CAS# 2353-45-9 can be found on the following state right to know lists: California.

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

T F

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 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S 7 Keep container tightly closed.

WGK (Water Danger/Protection)

CAS# 67-56-1: 1

CAS# 2353-45-9: No information available.

Canada - DSL/NDSL

CAS# 67-56-1 is listed on Canada's DSL List.

CAS# 2353-45-9 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of B2, D1A, D2B.

Canadian Ingredient Disclosure List

CAS# 67-56-1 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 3/17/1998

Revision #4 Date: 12/03/2002

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.