

SAFETY DATA SHEET



Conforms to regulation (EC) no. EU 453/2010

SECTION 1 - IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product Identifier

Product Name: Mirskys Fixative Concentrate

Product Number: HS-102B

1.2 Relevant Identified Uses of the Substance/Mixture and Uses Advised Against

Investigational research by professional users

1.3 Details of the Supplier of the Safety Data Sheet

Manufacturer

National Diagnostics
305 Patton Drive
Atlanta, GA 30036
(404) 699-2121
(800) 526-3867
info@nationaldiagnostics.com

1.4 Emergency Telephone Number

ChemTel Inc.

Contract number MIS8894340
1-800 255-3924 (United States, Canada, Puerto Rico & US Virgin Islands)
01-800-099-0731 (Mexico)
400-120-0751 (China)
000-800-100-4086 (India)
1-300-954-583 (Australia)
0-800-591-6042 (Brazil)
+1-813-255-3924 (All other regions)

SECTION 2 - HAZARDS IDENTIFICATION

2.1 Classification of the Substance or Mixture

Classification according to Regulation (EC) No. 1272/2008 [EU-GHS/CLP]

H315 - Skin Corrosion/Irritation (Category 2)
H317 - Skin Sensitizer (Category 1)
H319 - Serious Eye Damage/Eye Irritation (Category 2A)
H332 - Acute Toxicity-Inhalation (Category 4)
H335 - Specific Target Organ Toxicity, Single Exposure (Category 3)
H341 - Germ Cell Mutagenicity (Category 2)

2.2 Label Elements

GHS LABEL ELEMENTS AND CLASSIFICATION

GHS Label Elements



WARNING

H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H319 - Causes serious eye irritation.
H332 - Harmful if inhaled.
H335 - May cause respiratory irritation.
H341 - Suspected of causing genetic defects.
P262 - Do not get into eyes, on skin or on clothing.
P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
P304+312 - IF INHALED: Immediately call a POISON CENTER or doctor/physician IF you feel unwell.

2.3 Other Hazards

None found.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixture

Chemical Names/Description

Aqueous solution of glyoxal. All other ingredients less than one percent respectively.

Component List

Component	% Comp.	CAS #	EC #	1278/2008 Classification
Glyoxal	35 - 50	107-22-2	203-474-9	H315, H317, H319, H332, H335, H341

SECTION 4 - FIRST AID MEASURES

4.1 Description of First Aid Measures

Inhalation

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Ingestion

Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Call a physician.

Skin

Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eyes

Immediately flush eyes with plenty of water for at least fifteen minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

4.2 Most Important Symptoms and Effects, Both Acute and Delayed

Inhalation

Coughing, shortness of breath.

Ingestion

Nausea, vomiting, and diarrhea.

Skin

Redness, itching, and pain.

Eyes

Redness and pain.

4.3 Indication of Any Immediate Medical Attention and Special Treatment Needed

Unknown/not applicable

SECTION 5 - FIRE FIGHTING MEASURES

5.1 Extinguishing media

Use media appropriate to the primary cause of fire.

5.2 Special Hazards Arising from the Substance/Mixture

Hazardous Combustion Products

Thermal decomposition products may include carbon monoxide and carbon dioxide.

Hazardous Decomposition Products

Carbon dioxide and carbon monoxide may form when heated to decomposition.

Hazardous Polymerization

Will not occur under normal conditions of use (See Sections 10.4 & 10.5).

5.3 Advice for Firefighters

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

5.4 Further Information

No data available.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions

Wear appropriate protective equipment as specified in Section 8.

6.2 Environmental Precautions

Prevent discharge into the environment. Dike spills and stop leakage where practical. Do not allow material to enter drains.

6.3 Methods and Materials for Containment and Cleaning Up

Contain and clean up spill immediately, prevent from entering floor drains. Contain liquids using absorbents. Shovel all spill materials into disposal drum. Scrub spill area with detergent, flush with copious amounts of water.

6.4 References to Other Sections

For disposal information, see Section 13. For protective clothing and equipment, see Section 8.

SECTION 7 - HANDLING AND STORAGE

7.1 Precautions for Safe Handling

Avoid contact and inhalation. Do not get in eyes, on skin, on clothing. Wash thoroughly after handling.

7.2 Conditions for Safe Storage (including any incompatibles)

Keep in a tightly closed container, stored in a cooled, dry, ventilated area.

Incompatibles

Reacts weakly to acids. Incompatible with strong oxidizing agents, strong bases, silver, copper and iron salts. Corrosive to most metals.

7.3 Specific End Uses

Investigational research by professional users

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PRECAUTIONS

8.1 Control Parameters

ACGIH Threshold Limit Value (TLV): none established

OSHA Permissible Exposure Limit (PEL): none established

8.2 Exposure Controls

Engineering Controls

A system of local and/or general exhaust is recommended to keep employee exposures low. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source.

Respiratory Protection

For conditions of use where exposure to the dust or mist is apparent, a full-face dust/mist respirator may be worn. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator.

Eye Protection

Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

Skin Protection

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical & Chemical Properties

a. Appearance	Clear, almost colorless liquid	b. Odor	Mild odor
c. Odor Threshold	None	d. pH	2.1 - 2.7
e. Melting/Freezing Point (°C)	15	f. Boiling point (°C)	85
g. Flash Point (°C)	N.A.	h. Evaporation Rate	No Data
i. Flammability	N.A.	j. Upper/Lower Flammability or Explosive Limits	N.A.
k. Vapor Pressure	17 @ 20C	l. Vapor Density (Air = 1)	N.A.
m. Relative Density	1.27	n. Water Solubility	Soluble
o. Partition Coefficient n-octanol/water	Mixture	p. Autoignition Temperature (°C)	N.A.
q. Decomposition Temperature (°C)	N.A.	r. Viscosity	No data available.
s. Explosive Properties	N.A.	t. Oxidizing Properties	Not an oxidizer

SECTION 10 - STABILITY AND REACTIVITY

10.1 Reactivity

Reacts with amines, strong oxidizers or strong nucleophiles.

10.2 Chemical Stability

Stable under normal conditions of storage and use.

10.3 Possibility of Hazardous Reactions

Will not occur under normal conditions of use (See Sections 10.4 & 10.5).

10.4 Conditions to Avoid

Incompatibles.

10.5 Incompatible Materials

Reacts weakly to acids. Incompatible with strong oxidizing agents, strong bases, silver, copper and iron salts. Corrosive to most metals.

10.6 Hazardous Decomposition Products

Carbon dioxide and carbon monoxide may form when heated to decomposition.

SECTION 11 - TOXICOLOGICAL INFORMATION

Product LD50 Values

Oral Rat LD50 (mg/kg)

1100

Dermal Rabbit LD50 (mg/kg)

10 gm/kg

Component Cancer List Status

	NTP Carcinogen		IARC Category
	Known	Anticipated	
Glyoxal	No	No	None

Potential Health Effects

Inhalation

Causes irritation to the respiratory tract.

Ingestion

Harmful if swallowed. Specific health effects from ingestion unknown. May cause irritation to the gastrointestinal tract.

Skin

Causes irritation to skin.

Eyes

Causes irritation to eyes.

Carcinogenicity

Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

Mutagenicity

No information found.

Reproductive Toxicity

No information found.

Teratogenic Effects

No information found.

Routes of Entry

No information found.

Target Organ Statement

No information found.

SECTION 12 - ECOLOGICAL INFORMATION

12.1 Toxicity

	Vertebrates	Invertebrates	Algae	Microorganisms
Aquatic Toxicity (ppm unless otherwise noted)	Lc50 (96 hr, golden orfe) 464mg/l	LC50 (96hr, shrimp) 53mg/l	EC50 (72hrs) 347mg/l	EC50 (16hr) 102mg/l
	Birds	Arthropods	Plants	Microorganisms
Terrestrial Environment Toxicity (ppm unless otherwise noted)	No data	No data	EC50 (sativa) >1001mg/kg soil	EC50 >400mg/kg soil

12.2 Persistence and Degradability

Readily Biodegradable- >90% elimination in 19 days

12.3 Bioaccumulative Potential

Estimated BCF 3.2

12.4 Mobility in Soil

log Koc 0.32

12.5 Results of PBT and vPvB Assessment

Not PBT or vPvB

12.6 Other Adverse Effects

None

SECTION 13 - DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods

Offer surplus or non-recyclable product to licensed disposal company. Disposal is subject to user compliance with applicable law and product characteristics at time of disposal. Dispose of packaging as product.

SECTION 14 - TRANSPORT INFORMATION

	ADR/RID	IATA	IMO	DOT
14.1 UN Number	N.A.	N.A.	N.A.	N.A.
14.2 Shipping Name	Not Regulated	Not Regulated	Not Regulated	Not Regulated
14.3 Hazard Class	N.A.	N.A.	N.A.	N.A.
14.4 Packing Group	N.A.	N.A.	N.A.	N.A.
14.5 Environmental Hazards	N.A.	N.A.	N.A.	N.A.
14.6 Special Precautions	N.A.	N.A.	N.A.	N.A.

SECTION 15 - REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance/Mixture

United States

TSCA Regulatory Statement

All intentional ingredients are listed on the TSCA Inventory.

SARA 311/312 Hazard Categories

Component	Fire	Pressure	Reactivity	Acute	Chronic
Glyoxal	No	No	No	Yes	No

Europe

EEC Regulatory

All intentional ingredients are listed on the European EINECS Inventory.

SECTION 16 - OTHER INFORMATION

Revisional Updates

4/26/2019 - Updated Section 1.4

5/29/2015 - Updated Sections 2.1 and 3.2

10/22/2013 - Released Version 1.0

NFPA Codes

Health 1 Flammability 0 Reactivity 0

Dangers

Glyoxal

H315 - Causes skin irritation.

H317 - May cause an allergic skin reaction.

H319 - Causes serious eye irritation.

H332 - Harmful if inhaled.

H335 - May cause respiratory irritation.

H341 - Suspected of causing genetic defects.

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