

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

GHS product identifier

Product Name Chemiluminescent Substrate-A

Other means of identification

Product Code(s) 10031300

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use General Laboratory Use

Uses advised against No information available

Supplier's details

Supplier Address

HTG Molecular Diagnostics Inc.
3430 E. Global Loop
Tucson, AZ 85706
TEL: (520) 547-2827
FAX: (520) 547-2837

Emergency telephone number

Emergency Telephone Number CHEMTREC: 1-800-424-9300 for US/ 703-527-3887 outside US

2. HAZARDS IDENTIFICATION

Classification

This chemical is not considered hazardous according to the OSHA Hazard Communication Standard 2012 (29 CFR 1910.1200).

Not classified

GHS Label elements, including precautionary statements

Emergency Overview

Signal Word None

Hazard Statements
• None

The product contains no substances which at their given concentration are considered to be hazardous to health

Appearance Clear

Physical State Liquid.

Odor None

3430 E. Global Loop | Tucson, AZ 85706 | (877) 289-2615 | htgmolecular.com

Precautionary Statements**Prevention**

- None

General Advice

- None

Fire

- None

Spills and Leaks

- None

Storage

- None

Disposal

- None

Hazard Not Otherwise Classified (HNOC)

Not applicable

Other information

No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %	Trade secret
Ethyl alcohol	64-17-5	1-5	*

**The exact percentage (concentration) of composition has been withheld as a trade secret.*

4. FIRST AID MEASURES**Description of necessary first-aid measures****Eye Contact**

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. If irritation persists, call a physician.

Skin Contact

Wash off immediately with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. If skin irritation persists, call a physician.

Inhalation

Move to fresh air. If symptoms persist, call a physician.

Ingestion

Do NOT induce vomiting. Clean mouth with water and afterwards drink plenty of water. Never give anything by mouth to an unconscious person. Immediate medical attention is required.

Most important symptoms/effects, acute and delayed

Most Important Symptoms/Effects No information available.

Indication of immediate medical attention and special treatment needed, if necessary**Notes to Physician**

Treat symptomatically.

5. FIRE-FIGHTING MEASURES

3430 E. Global Loop | Tucson, AZ 85706 | (877) 289-2615 | htgmolecular.com

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media CAUTION: Use of water spray when fighting fire may be inefficient.

Specific Hazards Arising from the Chemical

No information available

Explosion Data

Sensitivity to Mechanical Impact

None.

Sensitivity to Static Discharge

None

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures**Personal Precautions**

Use personal protective equipment. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid contact with skin, eyes and clothing. Do not breathe vapors or spray mist.

Environmental Precautions**Environmental Precautions**

See Section 12 for additional Ecological Information

Methods and materials for containment and cleaning up**Methods for Containment**

Prevent further leakage or spillage if safe to do so.

Methods for Cleaning Up

Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling**Handling**

Wear personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Do not breathe vapors or spray mist.

Conditions for safe storage, including any incompatibilities**Storage**

Keep at temperatures between 2 °C and 8 °C. Bring to room temperature before opening.

Incompatible Products

Strong oxidizing agents. Strong reducing agents.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters**Exposure Guidelines**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
---------------	-----------	----------	------------

3430 E. Global Loop | Tucson, AZ 85706 | (877) 289-2615 | htgmolecular.com

Ethyl alcohol 64-17-5	TWA: 1000 ppm	TWA: 1000 ppm TWA: 1900 mg/m ³ (vacated) TWA: 1000 ppm (vacated) TWA: 1900 mg/m ³	IDLH: 3300 ppm 10% LEL TWA: 1000 ppm TWA: 1900 mg/m ³
--------------------------	---------------	--	--

Appropriate engineering controls

Engineering Measures	Showers Eyewash stations Ventilation systems
-----------------------------	--

Individual protection measures, such as personal protective equipment

Eye/Face Protection	Safety glasses with side-shields.
Skin and Body Protection	Chemical resistant gloves Lab coat and/or apron.
Respiratory Protection	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Keep away from food, drink and animal feeding stuffs. Wash hands before breaks and immediately after handling the product. Remove and wash contaminated clothing before re-use. Provide regular cleaning of equipment, work area and clothing.
-------------------------	---

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid	Appearance	Clear
Odor	None	Odor Threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks/ - Method</u>
pH	8	None known
Melting Point/Range	No data available	None known
Boiling Point/Boiling Range	Approximately 100 °C	None known
Flash Point	No data available	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limits in Air		
upper flammability limit	No data available	
lower flammability limit	No data available	
Vapor Pressure	No data available	None known
Vapor Density	No data available	None known
Relative Density	No data available	None known
Specific Gravity	No data available.	None known
Water Solubility	No data available	None known
Solubility in other solvents	No data available	None known
Partition coefficient: n-octanol/water	No data available	None known
Autoignition Temperature	No data available	None known
Decomposition Temperature	No data available	None known
Viscosity	No data available	None known

Flammable Properties	Not flammable
Explosive Properties	No data available
Oxidizing Properties	No data available

Other information

VOC Content (%)	No data available
------------------------	-------------------

3430 E. Global Loop | Tucson, AZ 85706 | (877) 289-2615 | htgmolecular.com

Bulk Density 1.0 g/mL

10. STABILITY AND REACTIVITY

Reactivity

No data available.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal processing.

Conditions to avoid

None known based on information supplied.

Incompatible materials

Strong oxidizing agents. Strong reducing agents.

Hazardous decomposition products

No decomposition if stored properly.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Description of possible hazardous to health effects is based on experience and/or toxicological characteristics of several ingredients

Inhalation

No known effect.

Eye Contact

May cause irritation.

Skin Contact

May be absorbed through the skin. May be harmful in contact with skin.

Ingestion

May be harmful if swallowed.

Toxicology data for the components

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Ethyl alcohol	7060 mg/kg (Rat)	-	124.7 mg/L (Rat) 4 h

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Delayed and immediate effects and also chronic effects from short and long term exposure

Sensitization

No information available.

Mutagenic Effects

No information available.

Carcinogenicity

The table below indicates whether each agency has listed any ingredient as a carcinogen. Ethanol has been shown to be carcinogenic in long-term studies only when consumed and abused as an alcoholic beverage.

Chemical Name	ACGIH	IARC	NTP	OSHA
Ethyl alcohol	A3	Group 1	Known	X

3430 E. Global Loop | Tucson, AZ 85706 | (877) 289-2615 | htgmolecular.com

ACGIH: (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

IARC: (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

NTP: (National Toxicity Program)

Known - Known Carcinogen

Reproductive Toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Aspiration Hazard	No information available.

Numerical measures of toxicity - Product**Acute Toxicity** No information available.**12. ECOLOGICAL INFORMATION****Ecotoxicity**

The environmental impact of this product has not been fully investigated.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Ethyl alcohol		LC50 96 h: 12.0 - 16.0 mL/L static (Oncorhynchus mykiss) LC50 96 h: > 100 mg/L static (Pimephales promelas) LC50 96 h: 13400 - 15100 mg/L flow-through (Pimephales promelas)	EC50 = 34634 mg/L 30 min EC50 = 35470 mg/L 5 min	LC50 48 h: 9268 - 14221 mg/L (Daphnia magna) EC50 24 h: = 10800 mg/L (Daphnia magna) EC50 48 h: = 2 mg/L Static (Daphnia magna)

Persistence and Degradability No information available.**Bioaccumulation** No information available.

Chemical Name	Log Pow
Ethyl alcohol	-0.32

Other Adverse Effects

No information available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated Packaging Do not re-use empty containers.

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Ethyl alcohol	Toxic Ignitable

14. TRANSPORT INFORMATION**DOT** Not regulated**TDG** Not regulated

3430 E. Global Loop | Tucson, AZ 85706 | (877) 289-2615 | htgmolecular.com

<u>MEX</u>	Not regulated
<u>ICAO</u>	Not regulated
<u>IATA</u>	Not regulated
<u>IMDG/IMO</u>	Not regulated
<u>RID</u>	Not regulated
<u>ADR</u>	Not regulated
<u>ADN</u>	Not regulated

15. REGULATORY INFORMATION

International Inventories

<u>TSCA</u>	This product contains ingredients which are not listed on the TSCA Inventory. It is for research and development purposes only.
<u>DSL</u>	Not determined

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

U.S. Federal Regulations

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

U.S. State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals:

Chemical Name	CAS-No	California Prop. 65
Ethyl alcohol	64-17-5	Developmental

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Illinois	Rhode Island
Ethyl alcohol	X	X	X	-	

3430 E. Global Loop | Tucson, AZ 85706 | (877) 289-2615 | htgmolecular.com

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION

NFPA	Health Hazard 0	Flammability 0	Instability 0	Physical and Chemical Hazards -
HMIS	Health Hazard 0	Flammability 0	Physical Hazard 0	Personal Protection X

Prepared By Product Stewardship
23 British American Blvd.
Latham, NY 12110
1-800-572-6501

Issuing Date 17-Apr-2013
Revision Date 17-Apr-2013
Revision Note Initial Release.

General Disclaimer

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet