

Praxair™ Material Safety Data Sheet

1. Chemical Product and Company Identification

Product Name:	Green Gauge Glass Liquid (MSDS No. P-4895-C)	Trade Name:	Green Gauge Glass Liquid
Chemical Name:	Not applicable	Synonyms:	Lindox low-gravity gauge glass liquid Part No. 5724-4100
Formula:	Mixture of dibutyl phthalate and sudan green dye	Chemical Family:	Not Applicable
Telephone:	Emergencies: 1-800-645-4633* CHEMTREC 1-800-424-9300* Routine: 1-800-PRAXAIR	Company Name:	Praxair, Inc. 39 Old Ridgebury Road Danbury CT 06810-5113

**Call emergency numbers 24 hours a day only for spills, leaks, fire, exposure, or accidents involving this product. For routine information contact your supplier, Praxair sales representative, or call 1-800-PRAXAIR (1-800-772-9247).*

2. Composition / Information on Ingredients

INGREDIENT NAME	CAS NUMBER	PERCENTAGE*	OSHA PEL	ACGIH TLV-TWA
Dibutyl phthalate	84-74-2	<100%	5 mg/m ³	5 mg/m ³
Sudan green dye	128-80-3	0.01%	None currently established	None currently established

** Percentages are approximate. *The symbol "<" means "less than."*

This product contains dibutyl phthalate, a toxic chemical, subject to the reporting requirements of section 313 of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

3. Hazards Identification

EMERGENCY OVERVIEW

DANGER! Flammable, irritating liquid and vapor.

Can cause discomfort if inhaled or swallowed.

Irritates the eyes and nasal passages.

Causes mutations, fetal toxicity, and cancer in laboratory animals.

Self-contained breathing apparatus may be required by rescue workers.

Odor: None or slightly aromatic

THRESHOLD LIMIT VALUE: See section 2. TLV-TWAs should be used as a guide in the control of health hazards and not as fine lines between safe and dangerous concentrations.

EFFECTS OF A SINGLE (ACUTE) OVEREXPOSURE:**INHALATION**–Vapors may irritate nasal passages, causing discomfort.**SKIN CONTACT**–No harm expected.**SWALLOWING**–May cause nausea and diarrhea.**EYE CONTACT**–May cause eye pain and excess tearing, but no evidence of damage.**EFFECTS OF REPEATED (CHRONIC) OVEREXPOSURE:** No harm expected**OTHER EFFECTS OF OVEREXPOSURE:** None known.**MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:** The toxicology and the physical and chemical properties of argon suggest that overexposure is unlikely to aggravate existing medical conditions.**SIGNIFICANT LABORATORY DATA WITH POSSIBLE RELEVANCE TO HUMAN HEALTH****HAZARD EVALUATION:** Dibutyl phthalate has been shown to cause embryotoxicity, fetotoxicity, and teratogenicity in laboratory animals. Evidence of embryotoxicity and teratogenicity were only observed at high doses when signs of maternal toxicity were seen. Some phthalates have been shown to cause cancer in laboratory animals at high doses.**CARCINOGENICITY:** None of the components of this product is listed by NTP, OSHA, or IARC.**4. First Aid Measures****INHALATION:** Remove to fresh air.**SKIN CONTACT:** Wash with soap and water.**SWALLOWING:** If victim is conscious and alert, give at least two glasses of milk or water and induce vomiting. Never give anything by mouth to an unconscious, convulsive, or unresponsive person. Call a physician.**EYE CONTACT:** Flush eyes with water. If discomfort persists, see a physician, preferably an ophthalmologist.**NOTES TO PHYSICIAN:** *There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition.***NOTE:** *This product is used as the visible working fluid in manometers and gauges. Users must be familiar with the operation and hazards associated with the equipment used with this liquid.***5. Fire Fighting Measures**

FLASH POINT (test method)	315°F (157.2°C)	AUTOIGNITION TEMPERATURE	757°F (402.8°C)
FLAMMABLE LIMITS IN AIR, % by volume	LOWER 0.47@456°F (235.6°C)	UPPER	Unknown, 2.5 (calculated)

EXTINGUISHING MEDIA: Water spray, dry chemical, CO₂ or foam. Water or foam may cause frothing.**SPECIAL FIRE FIGHTING PROCEDURES:****DANGER! Flammable, irritating liquid and vapor.** Immediately evacuate all personnel from danger area. Toxic fumes may be given off when green gauge glass liquid burns or is heated to decomposition. Use

self-contained breathing apparatus. Immediately spray container with water from maximum distance until cool, then move it away from fire area if without risk. On-site fire brigades must comply with OSHA 29 CFR 1910.156.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Combustible liquid. May form explosive mixtures with air and oxidizing agents. Heat of fire may build pressure in container, causing rupture. Flammable, irritating vapors may spread from spill. Vapors may be ignited by pilot lights, other flames, smoking, sparks, heaters, electrical equipment, static discharges or other ignition sources at locations distant from product handling point. Flammable atmospheres may linger. Before entering areas, especially confined areas, check atmosphere with approved device. No part of a container should be subjected to temperatures above 125°F (51.1°C).

HAZARDOUS COMBUSTION PRODUCTS: Toxic fumes may result from thermal decomposition or burning. (See section 10.)

6. Accidental Release Measures

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

DANGER! Flammable, irritating liquid and vapor. May form explosive mixtures with air. Immediately evacuate all personnel from danger area. Vapors may spread from spill. Use self-contained breathing apparatus where needed. (See section 8.) Remove all sources of ignition if without risk. Ventilate area of spill or move leaking container to a well-ventilated area. Prevent runoff from contaminating surrounding environment.

WASTE DISPOSAL METHOD: Prevent waste from contaminating the surrounding environment. Keep personnel away. Discard any product, residue, disposable container or liner in an environmentally acceptable manner, in full compliance with federal, state, and local regulations. If necessary, call your supplier for assistance.

7. Handling and Storage

Store and use with adequate ventilation. Separate containers from oxygen and other oxidizers by at least 20 feet or use a barricade of noncombustible material. This barricade should be at least 5 feet high and have a fire resistance rating of at least ½ hour. Store only where temperature will not exceed 125°F (52°C). Post "No Smoking or Open Flames" signs in storage and use areas. There must be no sources of ignition. All electrical equipment in storage areas must be explosion-proof. Storage areas must meet national electric codes for Class 1 hazardous areas.

PRECAUTIONS TO BE TAKEN IN HANDLING: Protect containers from damage. Electrical equipment must be non-sparking or explosion-proof. Wash thoroughly after handling. For other precautions in using this product, see section 16.

8. Exposure Controls/Personal Protection

VENTILATION/ENGINEERING CONTROLS:

LOCAL EXHAUST—Use an explosion-proof, local exhaust ventilation system with sufficient air flow velocity to maintain concentration below the permissible exposure limit.

MECHANICAL (general)—Not recommended as a primary ventilation system to control worker's exposure.

SPECIAL—Not applicable

OTHER—Not applicable

RESPIRATORY PROTECTION: Use any full-face dust or mist mask where ventilation is not adequate to keep exposure below the permissible exposure limit and for up to 10 times the limit. For higher concentrations, a full-face, air-supplied respirator is recommended. Respiratory protection must conform to OSHA rules as specified in 29 CFR 1910.134.

SKIN PROTECTION: Wear chemically protective gloves made of neoprene, butyl rubber, nitrile, or vitron. Select in accordance with OSHA 29 CFR 1910.132 and 1910.133.

EYE PROTECTION: Safety glasses or protective goggles and full face shield. Select in accordance with OSHA 29 CFR 1910.133.

OTHER PROTECTIVE EQUIPMENT: Protective clothing where needed. Select in accordance with OSHA 29 CFR 1910.132 and 1910.133. Regardless of protective equipment, never touch live electrical parts.

9. Physical and Chemical Properties

MOLECULAR WEIGHT: Not applicable	EXPANSION RATIO: Not applicable
SPECIFIC GRAVITY (H₂O=1): At 68°F (20°C) and 1 atm: 1.048	SOLUBILITY IN WATER: At 68°F (20°C): Negligible
SPECIFIC GRAVITY (air=1): At 68°F (20°C) and 1 atm: 9.6	VAPOR PRESSURE: At 68°F (20°C): <0.00194 psig (<0.1 mm Hg)
PERCENT VOLATILES BY VOLUME: 100%	EVAPORATION RATE (Butyl Acetate=1): Very low
BOILING POINT (1 atm): 644°F (340°C)	pH: Not applicable
FREEZING POINT (1 atm): -31°F (-35°C)	
APPEARANCE, ODOR, AND STATE: Clear, green, nonvolatile, oily liquid; odorless or slight aromatic odor.	

10. Stability and Reactivity

STABILITY:	Unstable	Stable	X
INCOMPATIBILITY (MATERIALS TO AVOID): Oxidizing agents, acids, alkalis. Contact with chlorine can cause an explosion.			
HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition may produce carbon monoxide and/or carbon dioxide.			
HAZARDOUS POLYMERIZATION:	May Occur	Will Not Occur	X
CONDITIONS TO AVOID: Heat. Mixture is stable at normal temperatures and pressures.			

11. Toxicological Information

See section 3.

12. Ecological Information

Green Gauge Glass Liquid does not contain any Class I or Class II ozone-depleting chemicals. Green Gauge Glass Liquid is not listed as a marine pollutant by DOT.

13. Disposal Considerations

WASTE DISPOSAL METHOD: Dispose of this product in an environmentally acceptable manner in full compliance with federal, state, and local regulations. Do not pour down drains, into sewers, or otherwise release into the environment. Place into lab packs for pickup by a licensed hazardous waste disposal service or use other authorized means. See section 6 for disposal following spills.

14. Transport Information

DOT/IMO SHIPPING NAME: Not regulated

HAZARD CLASS: Not applicable

IDENTIFICATION NUMBER: Not applicable

PRODUCT RQ: Not applicable

SHIPPING LABEL(s): Not required

PLACARD (When required): Not required

SPECIAL SHIPPING INFORMATION: None

15. Regulatory Information

The following selected regulatory requirements may apply to this product. Not all such requirements are identified. Users of this product are solely responsible for compliance with all applicable federal, state, and local regulations.

U.S. FEDERAL REGULATIONS:

EPA (Environmental Protection Agency)

CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (40 CFR Parts 117 and 302):

Reportable Quantity (RQ): 10 lbs (dibutyl phthalate)

SARA: Superfund Amendment and Reauthorization Act:

- **SECTIONS 302/304:** Require emergency planning based on Threshold Planning Quantity (TPQ) and release reporting based on Reportable Quantities (RQ) of extremely hazardous substances (40 CFR Part 355):

Threshold Planning Quantity (TPQ): None

Extremely Hazardous Substances (40 CFR 355): None

- **SECTIONS 311/312:** Require submission of Material Safety Data Sheets (MSDSs) and chemical inventory reporting with identification of EPA hazard categories. The hazard categories for this products are as follows:

IMMEDIATE: Yes PRESSURE: No
DELAYED: Yes REACTIVITY: No
FIRE: No

- **SECTION 313:** Requires submission of annual reports of release of toxic chemicals that appear in 40 CFR Part 372.

The dibutyl phthalate component requires reporting under this section.

40 CFR 68: Risk Management Program for Chemical Accidental Release Prevention: Requires development and implementation of risk management programs at facilities that manufacture, use, store, or otherwise handle regulated substances in quantities that exceed specified thresholds.

None of the components of this product is listed as a regulated substance.

TSCA: Toxic Substances Control Act: All product components are listed on the TSCA inventory.

OSHA (OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION):

29 CFR 1910.119 : Process Safety Management of Highly Hazardous Chemicals: Requires facilities to develop a process safety management program based on Threshold Quantities (TQ) of highly hazardous chemicals.

None of the components of this product is listed in Appendix A as a highly hazardous chemical.

STATE REGULATIONS:

CALIFORNIA: None of the components of this product is listed by California under the Safe Drinking Water Toxic Enforcement Act of 1986 (Proposition 65) as a chemical known to cause cancer.

PENNSYLVANIA: This product is subject to the Pennsylvania Worker and Community Right-To-Know Act (35 P.S. Sections 7301-7320).

16. Other Information

Be sure to read and understand all labels and instructions supplied with all containers of this product.

SPECIAL PRECAUTIONS: *Flammable, irritating liquid and vapor.* May form explosive mixtures with air. Use only spark-proof tools and explosion-proof equipment. Ground all equipment. Do not get liquid or vapor in eyes, on skin, or on clothing. Have safety showers and eyewash fountains immediately available to exposed workers. ***Store and use with adequate ventilation at all times.*** (See section 8.) Keep container closed when not in use, even when empty.

NOTE: *Prior to using any plastics, confirm their compatibility with the components of this mixture.*

MIXTURES: When you mix two or more chemicals, you can create additional, unexpected hazards. Obtain and evaluate the safety information for each component before you produce the mixture. Consult an industrial hygienist, or other trained person when you evaluate the end product. Remember, gases and liquids have properties that can cause serious injury or death.

HAZARD RATING SYSTEMS:**NFPA RATINGS:**

HEALTH = 2
FLAMMABILITY = 0
REACTIVITY = 0
SPECIAL None

HMIS RATINGS:

HEALTH = 2
FLAMMABILITY = 0
REACTIVITY = 0

Praxair asks users of this product to study this Material Safety Data Sheet (MSDS) and become aware of product hazards and safety information. To promote safe use of this product, a user should (1) notify employees, agents and contractors of the information on this MSDS and of any other known product hazards and safety information, (2) furnish this information to each purchaser of the product, and (3) ask each purchaser to notify its employees and customers of the product hazards and safety information.

The opinions expressed herein are those of qualified experts within Praxair, Inc. We believe that the information contained herein is current as of the date of this Material Safety Data Sheet. Since the use of this information and the conditions of use of the product are not within the control of Praxair, Inc., it is the user's obligation to determine the conditions of safe use of the product.

Praxair MSDSs are furnished on sale or delivery by Praxair or the independent distributors and suppliers who package and sell our products. To obtain current Praxair MSDSs for these products, contact your Praxair sales representative or local distributor or supplier. If you have questions regarding Praxair MSDSs, would like the form number and date of the latest MSDS, or would like the names of the Praxair suppliers in your area, phone or write the Praxair Call Center (**Phone:** 1-800-PRAXAIR; **Address:** Praxair Call Center, Praxair, Inc., PO Box 44, Tonawanda, NY 14150-7891).

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