

Safety Data Sheet

according to OSHA HCS 29 CFR 1910.1200(g)



Trade name: **50x NLuc-GLOW substrate**

Revision date: 06/01/2020

Product No: 325

1. PRODUCT AND COMPANY IDENTIFICATION

Product identifiers

Product name: **50x NLuc-GLOW Substrate**

Product No.: 325

Manufacturer: Prolume / NanoLight

CAS-no.: not assigned

EC-no.: not assigned

Other means of identification: 50x Oplo-Glow, Oplophorus luciferin, Luciferase Substrate

Relevant identified uses of the substance or mixture and uses advised against

Identified uses: substrate for luciferase, laboratory chemical

Details of the supplier of the safety data sheet

Supplier: Prolume
P.O. Box 2746
Pinetop, AZ 85935
USA

phone: +1 928-367-1200

email: info@prolume.com

Emergency telephone number

Phone: +1 928-367-1200

2. HAZARD IDENTIFICATION

Classification of the substance or mixture

GHS classification in accordance with 29 CFR 1910 (OSHA HCS) and No 1272/2008 [CLP] (EC).

Flammable Liquid (Category 2), H225

Eye irritation (Category 2A), H319

Highly flammable liquid or vapor.

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GHS label elements including precautionary statements



Pictogram

Signal word

DANGER

Hazard statement

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P233 Keep container tightly closed.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ ventilating/ lighting equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.

P264 Wash skin thoroughly after handling.

P280 Wear protective gloves/ eye protection/ face protection.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313 If eye irritation persists: Get medical advice/ attention.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

P403 + P235 Store in a well-ventilated place. Keep cool.

P501 Dispose of contents/ container to an approved waste disposal plant.

NFPA ratings (scale 0-4)

Health = 0

Fire = 3

Reactivity = 0

HMIS-ratings (scale 0-4)

Health = 0

Fire = 3

Reactivity = 0

Hazards not otherwise classified (HNOC) or not covered by GHS

none

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3. COMPOSTION/INFORMATION ON INGREDIENTS

Substances

Chemical characterization: Mixed compounds in alcoholic solvents.

Description: The alcoholic mixture contains the following hazardous substances in addition to non-hazardous substances that are not listed and withheld as part of a trade secret.

CAS-number	Component name	Total amount present	GHS classification
64-17-5	Ethanol	40 -60%	H225: Highly flammable H319: Causes serious eye irritation

4. FIRST AID MEASURES

Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed

None

Indication of any immediate medical attention and special treatment needed

No further relevant data available

5. FIREFIGHTING MEASURES

Suitable extinguishing media

Dry powder, dry sand. Do NOT use water jet.

Special hazards arising from the substance or mixture

Carbon oxides.

Special protective equipment for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

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6. ACCIDENTIAL RELEASE MEASURES

Personal precautions

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Vapors can accumulate in low areas.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for containment and cleaning up

Contain spillage, and then collect with non-combustible absorbent material (e.g. sand, earth, diatomaceous earth). Sweep up and shovel. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid direct contact with substance. Avoid inhalation of vapor or mist. Further processing of larger quantities, use explosion-proof equipment. Keep away from sources of ignition – No smoking. Take measures to prevent the build-up of electrostatic charge.

Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place. Store at $\leq -80^{\circ}\text{C}$. Product is light sensitive and hygroscopic. Protect from light at all times.

8. EXPOSURE CONTROLS – PERSONAL PROTECTION

Components with workplace control parameter

Substance: Ethanol CAS# 64-17-5, Cat# 325 NLuc-Glow substrate

Control parameter: Contains the following substances with occupational exposure limit values.

Component	CAS-No.	Value	Control parameters	Basis
Ethanol	64-17-5	TWA	1000 ppm 1900 mg/m ³	USA. OSHA Table Z-1 Limits for air contaminants
		STEL	1000 ppm	USA. ACGIH Threshold Limit
		PEL	1000 ppm 1900 mg/m ³	California permissible exposure limit for chemical contaminants (Title 8, Article 107)

TWA: 8-hour total weight average

STEL: short term exposure limit

PEL: permissible exposure limit as defined in 29 CFR 1910.1000

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Personal protective equipment

Hand protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Respiratory protection: Respiratory protection is not required for handling small quantities in a well-ventilated room. If larger levels of material are handled work either in a chemical fume hood or use a full-face supplied air respirator. Respirators and components should be tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Eye protection: Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Chemical Name	Alcoholic mixture
Appearance	Yellow viscous liquid
Odor	Alcohol like
Odor threshold	No data available
pH	No data available
Melting point / freezing point	No data available
Boiling point	78°C
Flash point	<23°C
Evaporate rate	No data available
Flammability	No data available
Explosive limits	Product is not explosive. Explosive air/vapor mixtures might form.
Vapor pressure	0.57 hPa at 19.6°C
Vapor density	1.6
Relative density	0.789 g/ml at 25°C
Solubility	No data available
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available

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Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available

10. STABILITY AND REACTIVITY

Reactivity: No data available

Chemical stability: Stable under recommended storage conditions.

Possibility of hazardous reactions: None under normal processing. Vapors may form explosive mixture with air.

Conditions to avoid: Heat, flames, sparks and light.

Materials to avoid: Oxidizing agents, various plastics, rubber.

Hazardous decomposition products: Carbon oxides. Nitrogen oxides.

11. TOXICOLOGICAL INFORMATION

Acute toxicity: Oral LD50 Not determined for mixture
Inhalation LC50 Not determined for mixture e
Dermal LD50 Not determined for mixture
Other information on acute toxicity no data available

Skin corrosion/irritation: no data available

Serious eye damage/eye irritation: causes serious eye irritation

Respiratory or skin sensitization: May be irritating to respiratory tract & mucus membranes

Germ cell mutagenicity: no data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available

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Specific target organ toxicity - single exposure (Globally Harmonized System): no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System): no data available

Aspiration hazard: no data available

Additional Information RTECS: Repeated dose toxicity - Rat - male - Oral - No observed adverse effect level - 1,730 mg/kg - Lowest observed adverse effect level - 3,200 mg/kg
RTECS: KQ6300000

12. ECOLOGICAL INFORMATION

Toxicity: no information available

Persistence and degradability: no information available

Biodegradation: no information available

Mobility in soil: no information available

Results of PBT and vPvB assessment: no information available as chemical safety assessment not required/not conducted

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

13. DISPOSAL CONSIDERATIONS

Do not dispose product directly into sewage. Consult local state or national regulation for proper disposal.

14. TRANSPORT INFORMATION

IATA, IMDG, DOT(US): Limited quantity exceptions of Class 3 under §173.150 (b) – No labelling required for maximum quantities of 500 ml.

UN number: 1170

UN proper shipping name: Ethanol

Transport hazard class: 3

Packing group: II

15. REGULATORY INFORMATION

US Federal Regulations US Toxic Substances Control Act (TSCA): 64-17-5 Ethanol

SARA 302: No chemicals were found.

SARA 313: No chemicals were found.

SARA 311/312 Hazards: No chemicals were found.

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16. OTHER INFORMATION

Classification according to Regulation (EC) Nr. 1272/2008

Prepared by: Regulatory Department - Prolume Inc.

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Department issuing SDS:

Prolume Inc.
P.O. Box 2746
Pinetop, AZ 85935

Date of preparation / revision: 06/01/2020

Abbreviations and acronyms:

DOT: US Department of Transportation
IATA: International Air Transport Association
IMDG: International Maritime Code for Dangerous Goods
ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health