

# Safety Data Sheet

according to OSHA HCS 29 CFR 1910.1200(g)



Trade name: **NanoFuel®-400a Solvent**

Revision date: 6/01/2020

Product No: 397

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## 1. PRODUCT AND COMPANY IDENTIFICATION

### Product identifiers

Product name: NanoFuel® -400a Solvent

Product No.: 397

Manufacturer: Prolume / NanoLight

CAS-no.: N/A

EC-no.: N/A

Other means of identification:

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

Identified uses: solvent for luciferins, coelenterazine

### 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

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## 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

Acute toxicity, Oral (Category 3), H301

Acute toxicity, Inhalation (Category 3), H331

Acute toxicity, Dermal (Category 3), H311

Specific target organ toxicity - single exposure (Category 1), Eyes, H370

For the full text of the H-Statements mentioned in this Section, see Section 16.

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## GHS label elements including precautionary statements



Pictograms:

Signal word

**Danger**

Hazard statement

H225

Highly flammable liquid and vapor.

H301+H311+H331

Toxic if swallowed, in contact with skin or if inhaled.

H370

Causes damage to organs (eyes).

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.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.

P260 Do not breathe fume/gas/mist/vapours/spray.

P264 Wash hand thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P303 + P361 + P353 IF ON SKIN (or hair): Remove/ 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.

P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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

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 = 1

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

Hazardous ingredient

Methanol (>= 50% - <80%), CAS-No. 67-56-1, Exact percentages are being withheld as a trade secret.

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## 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 plenty of water. Consult a physician.

#### In case of eye contact

Flush eyes with water as a precaution.

#### If swallowed

Immediately call a POISON CENTER or physician. Dilute immediately with water or milk. Induce vomiting. Call a physician.

### Most important symptoms and effects, both acute and delayed

Toxic if swallowed. Causes serious eye irritation. May damage fertility or the unborn child. May cause damage to organs. Flammable liquid. Primarily toxic by ingestion. Cannot be made non-poisonous. If ingested, give large quantity of water and induce vomiting. Call a physician. Contact may cause dryness and cracking of the skin. May cause irritation to the eyes. Wash areas of contact with water. May cause irritation to the respiratory system. EYE CONTACT: May cause irritation with burning and stinging with possible damage to the cornea and conjunctiva. SKIN CONTACT: Results in drying and cracking which can lead to secondary infections and dermatitis. Dermal absorption causes many of the symptoms of inhalation.

### Indication of any immediate medical attention and special treatment needed

Specific treatment (Wash areas of contact with water). Irrigate immediately with large quantity of water for at least 15 minutes. Call a physician if irritation develops. Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen. Wash areas of contact with soap and water for at least 15 minutes. Call a physician if irritation develops. Dilute immediately with water or milk. Induce vomiting. Call a physician.

## 5. FIREFIGHTING MEASURES

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### Suitable extinguishing media

Use dry chemical, foam or carbon dioxide to extinguish. Water, dry chemical, foam, or carbon dioxide. Water spray may be used to keep fire-exposed containers cool.

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Product No: 397

---

## Specific Hazards Arising from the Substance or Mixture

Highly flammable liquid and vapor. Moderate explosion hazard and dangerous fire hazard when exposed to heat, sparks and open flames. Above flash point, vapor-air mixtures are explosive within flammable limits noted above. Sensitive to static discharge.

## Special Protective Equipment for Firefighters

Wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

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## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions

Avoid breathing vapors, mist or gas. Remove all sources of ignition.

### 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

Remove all sources of ignition. Contain spill. Do not flush to sewer. Absorb with suitable inert material (vermiculite, dry sand, etc) and place in a chemical waste container for proper disposal in an approved waste disposal facility. Ventilate area of spill. Have extinguishing agent available in case of fire. Use non-sparking tools and equipment. Dispose of in accordance with local regulations.

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## 7. HANDLING AND STORAGE

### Precautions for safe handling

Avoid inhalation of vapor or mist. Avoid direct contact with substance. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

### Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place.

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## 8. EXPOSURE CONTROLS – PERSONAL PROTECTION

### Components with workplace control parameter

Substance: NanoFuel-400a Solvent

Control parameter: Methanol (CAS# 67-56-1) 200 ppm or 260 mg/m<sup>3</sup> TWA

### 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:** Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved atmosphere supplied respirator must be worn.

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according to OSHA HCS 29 CFR 1910.1200(g)



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**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	NanoFuel-400a Solvent
Appearance	Clear liquid
Odor	Alcohol
Odor threshold	No data available
pH	No data available
Melting point / freezing point	No data available
Boiling point	Approx. 64.5°C
Flash point	Approx. 13-19°C
Evaporate rate	No data available
Flammability	Flammable
Explosive limits	No data available
Vapor pressure	No data available
Vapor density	No data available
Relative density	0.89
Solubility	Miscible
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	464°C
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available

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---

## 10. STABILITY AND REACTIVITY

**Reactivity:** Vapor/air mixtures are explosive at intense warming.

**Chemical stability:** Stable under recommended storage conditions.

**Possibility of hazardous reactions:** risk of explosion with strong oxidizing agents

**Conditions to avoid:** excessive warming

**Materials to avoid:** No data available

**Hazardous decomposition products:** no information available

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## 11. TOXICOLOGICAL INFORMATION

**Acute toxicity:**

Oral LD50	5628 mg/kg (rat)
Inhalation LC50	Not applicable
Dermal LD50	Not applicable

Other information on acute toxicity no data available

**Skin corrosion/irritation:** no data available

**Serious eye damage/eye irritation:** Causes serious eye irritation. Wash arms, hands and face thoroughly after handling. Wear protective gloves and eye protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

**Respiratory or skin sensitization:** no data available

**Germ cell mutagenicity:** no data available

**Carcinogenicity:** no data available

**Reproductive toxicity:** May damage fertility or the unborn child. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves and eye protection. IF exposed or concerned: Get medical attention. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

**Specific target organ toxicity - single exposure (Globally Harmonized System):** May cause damage to organs. Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. IF exposed or concerned: Call a POISON CENTER or physician. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

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

**Aspiration hazard:** no data available

**Additional Information RTECS:** None

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Product No: 397

---

## 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.

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## 13. DISPOSAL CONSIDERATIONS

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

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## 14. TRANSPORT INFORMATION

IATA, IMDG, DOT(US) transport regulation exempt due to low quantity.

UN number: not applicable

UN proper shipping name: not applicable

Transport hazard class: not applicable

Packing group: not applicable

Environmental hazards: not applicable

Special precaution for user: not applicable

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## 15. REGULATORY INFORMATION

US Federal Regulations US Toxic Substances Control Act (TSCA):

All components of this solution are listed as active on the TSCA Inventory or are mixtures (hydrates) of active items listed on the TSCA Inventory.

Methyl Alcohol (CAS # 67-56-1): Present (ACTIVE)

SARA 302: No chemicals were found.

SARA 313: Methyl Alcohol (CAS # 67-56-1): 1.0 % de minimis concentration

SARA 311/312 Hazards: Methyl Alcohol (CAS # 67-56-1): 5000 lb final RQ; 2270 kg final RQ

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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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Its use must be supervised by a technically qualified individual experienced in handling potentially hazardous chemicals. Prolume shall not be held liable for any damage resulting from handling or contact with the above product.

Department issuing SDS:

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

Date of preparation / revision: 04/20/2024

### 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*