



# L-ARGININE-N-FMOC, PBF-OH (U-13C6, 99%) (CONTAINS SOLVENT)

## Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 07/03/2011

Revision date: 30/06/2016

Supersedes: 01/02/2013

Version: 4.0

**CLM-8475-H**

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form	: Substance
Substance name	: L-ARGININE-N-FMOC, PBF-OH (U-13C6, 99%) (CONTAINS SOLVENT)
CAS No	: 154445-77-9 (Unlabeled)
Product code	: CLM-8475-H
Formula	: C <sub>28</sub> H <sub>40</sub> N <sub>4</sub> O <sub>7</sub> S
Synonyms	: L-Arginine-N-FMOC,Pbf / N $\alpha$ -Fmoc-N $\omega$ -(2,2,4,6,7-pentamethyldihydrobenzofuran-5-sulfonyl)-L-arginine / N $\alpha$ -Fmoc-N $\omega$ -Pbf-L-arginine

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

##### 1.2.1. Relevant identified uses

Main use category	: Professional use
Industrial/Professional use spec	: For professional use only.

##### 1.2.2. Uses advised against

No additional information available

#### 1.3. Details of the supplier of the safety data sheet

Cambridge Isotope Laboratories, Inc.  
50 Frontage Road  
Andover, MA 01810  
USA

USA: 1-800-322-1174 Int: 1-978-749-8000  
[cilsales@isotope.com](mailto:cilsales@isotope.com) [www.isotope.com](http://www.isotope.com)

#### Emergency telephone number

Emergency numbers:

Chemtrec: 1-800-424-9300 (24 hours)  
International: 1-703-741-5970 (24 hours)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Skin Irrit. 2 H315  
Eye Irrit. 2 H319  
STOT SE 3 H335

Full text of H-phrases: see section 16

##### Classification according to Directive 67/548/EEC or 1999/45/EC

Xi; R36/37/38

Full text of R-phrases: see section 16

##### Classification (GHS-US)

Skin Irrit. 2 H315  
Eye Irrit. 2A H319  
STOT SE 3 H335

##### Adverse physicochemical, human health and environmental effects

No additional information available

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### 2.2. Label elements

#### Labeling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS07

Signal word (CLP) :

Warning

Hazard statements (CLP) :

H315 - Causes skin irritation  
H319 - Causes serious eye irritation  
H335 - May cause respiratory irritation

Precautionary statements (CLP) :

P261 - Avoid breathing dust, fume, gas, mist, spray, vapors  
P264 - Wash Both hands thoroughly after handling  
P271 - Use only outdoors or in a well-ventilated area  
P280 - Wear protective clothing, protective gloves  
P302+P352 - IF ON SKIN: Wash with plenty of water/...  
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing  
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P312 - Call a POISON CENTER/doctor/.../if you feel unwell

#### GHS-US labeling

Hazard pictograms (GHS-US) :



GHS07

Signal word (GHS-US) :

Warning

Hazard statements (GHS-US) :

H315 - Causes skin irritation  
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P271 - Use only outdoors or in a well-ventilated area  
P280 - Wear protective clothing, protective gloves  
P302+P352 - IF ON SKIN: Wash with plenty of soap and water  
P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P312 - Call a POISON CENTER/doctor/physician if you feel unwell  
P321 - Specific treatment (see Hazard pictograms (CLP) on this label)  
P332+P313 - If skin irritation occurs: Get medical advice/attention  
P337+P313 - If eye irritation persists: Get medical advice/attention  
P362 - Take off contaminated clothing and wash before reuse  
P403+P233 - Store in a well-ventilated place. Keep container tightly closed  
P405 - Store locked up  
P501 - Dispose of contents/container to Comply with applicable regulations.

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Name	Product identifier	%	Classification according to Directive 67/548/EEC
L-ARGININE-N-FMOC, PBF-OH (U-13C6, 99%) (CONTAINS SOLVENT) (Main constituent)	(CAS No) 154445-77-9 (Unlabeled)	100	Xi; R36/37/38

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according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
L-ARGININE-N-FMOC, PBF-OH (U-13C6, 99%) (CONTAINS SOLVENT) (Main constituent)	(CAS No) 154445-77-9 (Unlabeled)	100	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335

Full text of R-, H- and EUH-phrases: see section 16

Name	Product identifier	%	Classification (GHS-US)
L-ARGININE-N-FMOC, PBF-OH (U-13C6, 99%) (CONTAINS SOLVENT) (Main constituent)	(CAS No) 154445-77-9 (Unlabeled)	100	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335

Full text of H-phrases: see section 16

### 3.2. Mixtures

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general	: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
First-aid measures after inhalation	: If breathed in, move person to fresh air. If not breathing, give artificial respiration. Consult a physician.
First-aid measures after skin contact	: Wash with soap and plenty of water. Consult a physician.
First-aid measures after eye contact	: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
First-aid measures after ingestion	: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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

Symptoms/injuries after inhalation	: May be harmful if inhaled. Causes respiratory tract irritation.
Symptoms/injuries after skin contact	: May be harmful if absorbed through skin. Causes skin irritation.
Symptoms/injuries after eye contact	: Causes eye irritation.
Symptoms/injuries after ingestion	: May be harmful if swallowed.

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

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.

### 5.2. Special hazards arising from the substance or mixture

No additional information available

### 5.3. Advice for firefighters

Firefighting instructions	: Wear self contained breathing apparatus for fire fighting if necessary.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Emergency procedures : Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Avoid breathing dust.

#### 6.1.2. For emergency responders

No additional information available

### 6.2. Environmental precautions

Do not let product enter drains.

### 6.3. Methods and material for containment and cleaning up

For containment : Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

### 6.4. Reference to other sections

No additional information available

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### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

- Additional hazards when processed : Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.
- Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

#### 7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Keep container tightly closed in a cool, dry and well-ventilated place.
- Storage conditions : Store refrigerated (-5 C to 5 C). Protect from light.

#### 7.3. Specific end use(s)

No additional information available

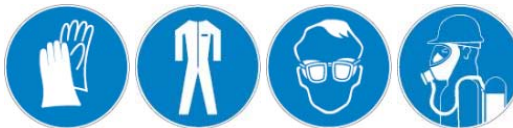
### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

No additional information available

#### 8.2. Exposure controls

- Appropriate engineering controls : Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
- Personal protective equipment : Gloves. Protective clothing. Protective goggles. Self-contained breathing apparatus.



- Hand protection : Wear suitable protective clothing and gloves.
- Eye protection : Wear safety glasses with side shields (or goggles) and a face shield.
- Skin and body protection : Choose body protection according to the amount and concentration of the dangerous substance at the work place.
- Respiratory protection : When appropriate, use NIOSH/CEN approved respirator.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

- Physical state : Solid
- Appearance : Powder, Crystalline.
- Molecular mass : 654.73 g/mol (Labeled)
- Color : White, Colourless.
- Odor : No data available
- Odor threshold : No data available
- pH : No data available
- Relative evaporation rate (butyl acetate=1) : No data available
- Melting point : No data available
- Freezing point : No data available
- Boiling point : No data available
- Flash point : No data available
- Self ignition temperature : No data available
- Decomposition temperature : No data available
- Flammability (solid, gas) : No data available
- Vapor pressure : No data available
- Relative vapor density at 20 °C : No data available
- Relative density : No data available
- Solubility : No data available
- Log Pow : No data available
- Log Kow : No data available
- Viscosity, kinematic : No data available
- Viscosity, dynamic : No data available
- Explosive properties : No data available

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Oxidizing properties : No data available

Explosive limits : No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Two years after receipt of order if stored as above. Re-QC after two years.

### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid

No additional information available

### 10.5. Incompatible materials

Strong oxidizing agents.

### 10.6. Hazardous decomposition products

carbon oxides. Nitrogen oxides. Sulphur oxides.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

Skin corrosion/irritation : Causes skin irritation.  
No data available

Serious eye damage/irritation : Causes serious eye irritation.  
No data available

Respiratory or skin sensitization : Not available  
No data available

Germ cell mutagenicity : Not available

Carcinogenicity : Not classified

Reproductive toxicity : Not available

Specific target organ toxicity (single exposure) : May cause respiratory irritation.

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

Potential Adverse human health effects and symptoms : To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Symptoms/injuries after inhalation : May be harmful if inhaled. Causes respiratory tract irritation.

Symptoms/injuries after skin contact : May be harmful if absorbed through skin. Causes skin irritation.

Symptoms/injuries after eye contact : Causes eye irritation.

Symptoms/injuries after ingestion : May be harmful if swallowed.

## SECTION 12: Ecological information

### 12.1. Toxicity

No additional information available

### 12.2. Persistence and degradability

**L-ARGININE-N-FMOC, PBF-OH (U-13C6, 99%) (CONTAINS SOLVENT) (154445-77-9 (Unlabeled))**

Persistence and degradability	Not available.
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### 12.3. Bioaccumulative potential

**L-ARGININE-N-FMOC, PBF-OH (U-13C6, 99%) (CONTAINS SOLVENT) (154445-77-9 (Unlabeled))**

Bioaccumulative potential	Not available.
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### 12.4. Mobility in soil

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Ecology - soil	Not available.
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### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Other adverse effects

Other adverse effects : Not available.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Regional legislation (waste) : Waste materials should be disposed of under conditions which meet Federal, State, and Local environmental control regulations.

Waste disposal recommendations : Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Ecology - waste materials : Dispose of as unused product.

## SECTION 14: Transport information

In accordance with ADR / RID / ADN / IMDG / ICAO / IATA

### 14.1. UN number

Not applicable

### 14.2. UN proper shipping name

Not applicable

### 14.3. Additional information

Other information : No supplementary information available.

Special transport precautions : Not dangerous goods.

### Overland transport

No additional information available

### Transport by sea

No additional information available

### Air transport

No additional information available

### 14.4. Environmental hazards

Other information : No supplementary information available.

### 14.5. Special precautions for user

Special transport precautions : Not dangerous goods.

### 14.6. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

**L-ARGININE-N-FMOC, PBF-OH (U-13C6, 99%) (CONTAINS SOLVENT) (154445-77-9 (Unlabeled))**

SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard
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### 15.2. International regulations

#### CANADA

**L-ARGININE-N-FMOC, PBF-OH (U-13C6, 99%) (CONTAINS SOLVENT) (154445-77-9 (Unlabeled))**

Listed on the Canadian DSL (Domestic Substances List) inventory.
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### 15.2.1. National regulations

No additional information available

### 15.3. US State regulations

#### L-ARGININE-N-FMOC, PBF-OH (U-13C6, 99%) (CONTAINS SOLVENT)(154445-77-9 (Unlabeled))

State or local regulations	U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.
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## SECTION 16: Other information

Other information : This product is not radioactive. The data given for this product are those of the corresponding unlabeled compound, unless specifically indicated otherwise. Health and safety data for labeled compounds are generally not available, but are assumed to be similar or identical to the corresponding unlabeled compound.

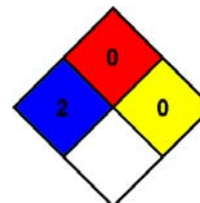
Full text of R-, H- and EUH-phrases::

Eye Irrit. 2	Serious eye damage/eye irritation Category 2
Skin Irrit. 2	skin corrosion/irritation Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation
R36/37/38	Irritating to eyes, respiratory system and skin
Xi	Irritant

NFPA health hazard : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

NFPA fire hazard : 0 - Materials that will not burn.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



### HMIS III Rating

Health : 2 Moderate Hazard - Temporary or minor injury may occur

Flammability : 0 Minimal Hazard

Physical : 0 Minimal Hazard

CIL Multi-Solvent Mixture SDS

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*