

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 06/08/2014 Revision date: 22/01/2021 Supersedes: 20/02/2019 Version: 5.0

NLM-6695

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

1.1. Product identifier

Product form : Mixtures

Product name : "CELL FREE" AMINO ACID MIX (20 AA) (U-15N, 96-98%)

Product code : NLM-6695

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 <u>cilsales@isotope.com</u> 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 Skin Sens. 1 H317

Full text of hazard classes and H-statements : see section 16

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Xi; R36/38 R43

Full text of R-phrases: see section 16

GHS-US classification

Skin Irrit. 2 H315 Eye Irrit. 2 H319 Skin Sens. 1 H317

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

22/01/2021 EN (English US) 1/9

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

2.2. Label elements

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

Hazard pictograms (CLP)



Signal word (CLP) : Warning

Hazardous ingredients : ALGAL AMINO ACID MIXTURE (U-15N, 98%)

Hazard statements (CLP) : H315 - Causes skin irritation

H317 - May cause an allergic skin reaction H319 - Causes serious eye irritation

Precautionary statements (CLP) : P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.

P264 - Wash hands, forearms and face thoroughly after handling.

P272 - Contaminated work clothing should not be allowed out of the workplace. P280 - Wear protective gloves/protective clothing/eye protection/face protection.

P302+P352 - IF ON SKIN: Wash with plenty of soap and water.

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove

contact lenses, if present and easy to do. Continue rinsing. P332+P313 - If skin irritation occurs: Get medical advice/attention. P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.

GHS-US labeling

Hazard pictograms (GHS-US)



GHS07

Signal word (GHS-US) : Warning

Hazard statements (GHS-US) : H315 - Causes skin irritation

H317 - May cause an allergic skin reaction H319 - Causes serious eye irritation

Precautionary statements (GHS-US) : P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.

P264 - Wash hands, forearms and face thoroughly after handling.

P272 - Contaminated work clothing must not be allowed out of the workplace

P280 - Wear protective clothing, protective gloves. P302+P352 - If on skin: Wash with plenty of water

P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact

lenses, if present and easy to do. Continue rinsing

P321 - Specific treatment (see supplemental first aid instruction on this label)

P332+P313 - If skin irritation occurs: Get medical advice/attention.
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.

P363 - Wash contaminated clothing before reuse.

P501 - Dispose of contents/container to hazardous or special waste collection point, in

accordance with local, regional, national and/or international regulation

2.3. Other hazards

No additional information available

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

5.2. MIXINGS			
Name	Product identifier	%	Classification according to Directive 67/548/EEC
ALGAL AMINO ACID MIXTURE (U-15N, 98%)		~ 85	Xi; R36/38 R43
L-ASPARAGINE:H2O (15N2, 98%)	(CAS-No.) 287484-32-6 (EC-No.) 200-735-9 (Unlabeled)	~ 5	Not classified

22/01/2021 EN (English US) 2/9

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Name	Product identifier	%	Classification according to Directive 67/548/EEC
L-GLUTAMINE (15N2, 98%)	(CAS-No.) 204451-48-9 (EC-No.) 200-292-1 (Unlabeled)	~ 4	Not classified
L-CYSTEINE (15N, 98%)	(CAS-No.) 204523-09-1 (EC-No.) 200-158-2 (Unlabeled)	~ 3	Not classified
L-TRYPTOPHAN (15N2, 98%)	(CAS-No.) 204634-20-8 (EC-No.) 200-795-6 (Unlabeled) (EC Index-No.)	~ 3	Not classified
Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
ALGAL AMINO ACID MIXTURE (U-15N, 98%)		~ 85	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317
L-ASPARAGINE:H2O (15N2, 98%)	(CAS-No.) 287484-32-6 (EC-No.) 200-735-9 (Unlabeled)	~ 5	Not classified
L-GLUTAMINE (15N2, 98%)	(CAS-No.) 204451-48-9 (EC-No.) 200-292-1 (Unlabeled)	~ 4	Not classified
L-CYSTEINE (15N, 98%)	(CAS-No.) 204523-09-1 (EC-No.) 200-158-2 (Unlabeled)	~ 3	Not classified
L-TRYPTOPHAN (15N2, 98%)	(CAS-No.) 204634-20-8 (EC-No.) 200-795-6 (Unlabeled) (EC Index-No.)	~ 3	Not classified
Name	Product identifier	%	GHS-US classification
ALGAL AMINO ACID MIXTURE (U-15N, 98%)		~ 85	Skin Irrit. 2, H315 Skin Sens. 1, H317
L-ASPARAGINE:H2O (15N2, 98%)	(CAS-No.) 287484-32-6	~ 5	Not classified
L-GLUTAMINE (15N2, 98%)	(CAS-No.) 204451-48-9	~ 4	Not classified
L-CYSTEINE (15N, 98%)	(CAS-No.) 204523-09-1	~ 3	Not classified
L-TRYPTOPHAN (15N2, 98%)	(CAS-No.) 204634-20-8	~ 3	Not classified

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

SECTION 4: First aid measures

Description of first aid measures

First-aid measures general : If you feel unwell, seek medical advice (show the label where possible). Evacuate danger area.

First-aid measures after inhalation When symptoms occur: go into open air and ventilate suspected area. If not breathing give

artificial respiration. Get medical advice/attention.

Wash with plenty of soap and water. and soap. Get immediate medical advice/attention. First-aid measures after skin contact

First-aid measures after eye contact Rinse cautiously with water for several minutes.

Never give anything by mouth to an unconscious person. Rinse mouth out with water. Get First-aid measures after ingestion

medical advice/attention.

Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation : May be harmful if inhaled. May cause respiratory irritation. Symptoms/effects after skin contact Causes skin irritation. May cause an allergic skin reaction.

Symptoms/effects after eye contact : Causes serious eve irritation. Symptoms/effects after ingestion : May be harmful if swallowed.

Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media : Water spray. Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO2).

Unsuitable extinguishing media : Do not use a heavy water stream.

Special hazards arising from the substance or mixture

No additional information available

Advice for firefighters

Firefighting instructions Use water spray or fog for cooling exposed containers. Exercise caution when fighting any

chemical fire. Prevent fire-fighting water from entering environment.

Protection during firefighting Do not enter fire area without proper protective equipment, including respiratory protection.

Wear recommended personal protective equipment.

22/01/2021 EN (English US) 3/9

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Avoid breathing vapors, mist, gas. Avoid dust formation. Use personal protective equipment as

required. Ensure adequate air ventilation. Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information

refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Prevent entry to sewers and public waters. Do not allow to enter drains or water courses. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Take up mechanically (sweeping, shoveling) and collect in suitable container for disposal.

Methods for cleaning up : This material and its container must be disposed of in a safe way, and as per local legislation.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or

smoking and when leaving work. Provide good ventilation in process area to prevent formation

of vapor

Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or

smoking and when leaving work. Handle in accordance with good industrial hygiene and safety

practice.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Store in a well-ventilated place. Keep container tightly closed.

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 : Wash hands and other exposed areas with mild soap and water before eating, drinking or

smoking and when leaving work.

Personal protective equipment : Gloves. Protective clothing. Protective goggles. Self-contained breathing apparatus.









Materials for protective clothing

Eye protection

Wear suitable protective clothing and gloves.

Hand protection : Wear suitable protective clothing and gloves.

: Chemical goggles or safety glasses.

Skin and body protection : Wear suitable protective clothing, gloves and eye/face protection.

Respiratory protection : In case of inadequate ventilation wear respiratory protection. Approved supplied air respirator.

Environmental exposure controls : Avoid release to the environment.

Other information : Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid
Appearance : Solid

Color : White to Beige
Odor : No data available
Odor threshold : No data available
pH : No data available

22/01/2021 EN (English US) 4/9

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

: No data available Relative evaporation rate (butyl acetate=1) Melting point No data available Freezing point : No data available Boiling point : No data available Flash point : No data available Auto-ignition temperature No data available : No data available Decomposition temperature Flammability (solid, gas) : Non flammable Vapor pressure No data available Relative vapor density at 20 °C No data available : No data available Relative density Solubility : No data available : No data available Log Pow Log Kow No data available Viscosity, kinematic : No data available Viscosity, dynamic : No data available Explosive properties No data available : No data available Oxidizing properties **Explosion limits** : No data available

Other information

No additional information available

SECTION 10: Stability and reactivity

Reactivity

No additional information available

Chemical stability

Five years after receipt if stored as stated in "Storage" section. Re-QC after 5 years.

Possibility of hazardous reactions

No additional information available

Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

Incompatible materials

Strong acids. Strong bases.

Hazardous decomposition products

Carbon oxides (CO, CO2).

Reproductive toxicity

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Specific target organ toxicity - single exposure

: Not classified Acute toxicity

L-GLUTAMINE (15N2, 98%) (204451-48-9)				
LD50 oral rat	7500 mg/kg			
L-CYSTEINE (15N, 98%) (204523-09-1)	L-CYSTEINE (15N, 98%) (204523-09-1)			
LD50 oral rat	5850 mg/kg female			
LD50 dermal rat	> 2000 mg/kg male and female			
L-TRYPTOPHAN (15N2, 98%) (204634-20-8)				
LD50 oral rat	> 16000 mg/kg Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste): Eye: Ptosis. Behavioral: Coma. Nutritional and Gross Metabolic: Changes in: Body temperature decrease.			
Skin corrosion/irritation	: Causes skin irritation.			
Serious eye damage/irritation	: Causes serious eye irritation.			
Respiratory or skin sensitization	: May cause an allergic skin reaction.			
Germ cell mutagenicity	: Not classified			
Carcinogenicity	: Not classified			

22/01/2021 EN (English US) 5/9

: Not classified

: Not classified

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

May be harmful if inhaled. May cause respiratory irritation.

Specific target organ toxicity - repeated

Symptoms/effects after inhalation

exposure

: Not classified

Aspiration hazard

: Not classified

Potential Adverse human health effects and symptoms

: 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.

Symptoms/effects after skin contact : Causes skin irritation. May cause an allergic skin reaction.

Symptoms/effects after eye contact : Causes serious eye irritation.
Symptoms/effects after ingestion : May be harmful if swallowed.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general

 The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

L-CYSTEINE (15N, 98%) (204523-09-1)	
LC50 fish 1	> 100 mg/l Danio Rerio (Zebra fish) - 96 h
EC50 Daphnia 1	> 100 mg/l Daphnia magna (Water flea) - 48 h

12.2. Persistence and degradability

L-CYSTEINE (15N, 98%) (204523-09-1)	
Persistence and degradability	Aerobic - exposure time: 28 d.
Biodegradation	98 % Readily biodegradable

12.3. Bioaccumulative potential

L-GLUTAMINE (15N2, 98%) (204451-48-9)		
	Log Pow	-4.609

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

Other information : Avoid release to the environment.

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.

Product/Packaging 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 / IMDG / IATA / ADN

14.1. UN number

Not applicable

14.2. UN proper shipping name

Not applicable

14.3. Additional information

Other information

: No supplementary information available.

Overland transport

No additional information available

22/01/2021 EN (English US) 6/9

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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

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

10.11. OO 1 Gudian regulations			
"CELL FREE" AMINO ACID MIX (20 AA) (U-15N, 96-98%)			
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302.		
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313.		
L-GLUTAMINE (15N2, 98%) (204451-48-9)			
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302		
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313		
L-CYSTEINE (15N, 98%) (204523-09-1)			
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard		
L-TRYPTOPHAN (15N2, 98%) (204634-20-8)			
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302		
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313		
L-ASPARAGINE:H2O (15N2, 98%) (287484-32-6)			
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302		
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313		
ALGAL AMINO ACID MIXTURE (U-15N, 98%)			
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302.		
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313.		

15.2. International regulations

CANADA

"CELL FREE" AMINO ACID MIX (20 AA) (U-15N, 96-98%)

Listed on the Canadian DSL (Domestic Substances List)

15.2.1. National regulations

No additional information available

15.3. US State regulations

"CELL FREE" AMINO ACID MIX (20 AA) (U-15N, 96-98%)()		
U.S California - Proposition 65 - Carcinogens List	No	
U.S California - Proposition 65 - Developmental Toxicity	No	
U.S California - Proposition 65 - Reproductive Toxicity - Female	No	
U.S California - Proposition 65 - Reproductive Toxicity - Male	No	
State or local regulations	U.S Pennsylvania - RTK (Right to Know) List U.S New Jersey - Right to Know Hazardous Substance List	

22/01/2021 EN (English US) 7/9

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

L-GLUTAMINE (15N2,	98%) (204451-48-9)			
U.S California - Proposition 65 - Carcinogens List	U.S California - Proposition 65 - Developmental Toxicity	U.S California - Proposition 65 - Reproductive Toxicity - Female	U.S California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	
L-CYSTEINE (15N, 98%	%) (204523-09-1)			
U.S California - Proposition 65 - Carcinogens List	U.S California - Proposition 65 - Developmental Toxicity	U.S California - Proposition 65 - Reproductive Toxicity - Female	U.S California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	
L-TRYPTOPHAN (15N2	2, 98%) (204634-20-8)			
U.S California - Proposition 65 - Carcinogens List	U.S California - Proposition 65 - Developmental Toxicity	U.S California - Proposition 65 - Reproductive Toxicity - Female	U.S California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	
L-ASPARAGINE:H2O (15N2, 98%) (287484-32-6)			<u> </u>
U.S California - Proposition 65 - Carcinogens List	U.S California - Proposition 65 - Developmental Toxicity	U.S California - Proposition 65 - Reproductive Toxicity - Female	U.S California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	
ALGAL AMINO ACID N	MIXTURE (U-15N, 98%)			
U.S California - Proposition 65 - Carcinogens List	U.S California - Proposition 65 - Developmental Toxicity	U.S California - Proposition 65 - Reproductive Toxicity - Female	U.S California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	
L-GLUTAMINE (15N2,	98%) (204451-48-9)		<u>'</u>	
State or local regulation				

State or local regulations

- U.S. Pennsylvania RTK (Right to Know) List
- U.S. New Jersey Right to Know Hazardous Substance List

L-CYSTEINE (15N, 98%) (204523-09-1)

State or local regulations

- U.S. Pennsylvania RTK (Right to Know) List
- U.S. New Jersey Right to Know Hazardous Substance List

L-TRYPTOPHAN (15N2, 98%) (204634-20-8)

State or local regulations

- U.S. Pennsylvania RTK (Right to Know) List
- U.S. New Jersey Right to Know Hazardous Substance List

L-ASPARAGINE:H2O (15N2, 98%) (287484-32-6)

State or local regulations

- U.S. Pennsylvania RTK (Right to Know) List
- U.S. New Jersey Right to Know Hazardous Substance List

ALGAL AMINO ACID MIXTURE (U-15N, 98%)

State or local regulations

- U.S. Pennsylvania RTK (Right to Know) List
- U.S. New Jersey Right to Know Hazardous Substance List

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.

22/01/2021 EN (English US) 8/9

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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
Skin Sens. 1	Skin sensitization, Category 1
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
R36/38	Irritating to eyes and skin
R43	May cause sensitization by skin contact
Xi	Irritant

NFPA health hazard : 2 - Materials that, under emergency conditions, can cause

temporary incapacitation or residual injury.

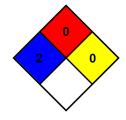
NFPA fire hazard : 0 - Materials that will not burn under typical fire conditions,

including intrinsically noncombustible materials such as

concrete, stone, and sand.

NFPA reactivity : 0 - Material that in themselves are normally stable, even

under fire conditions.



Hazard 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

22/01/2021 EN (English US) 9/9