



# LABELED AMINO ACID STANDARDS SET A1

## 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: 06/11/2014

Revision date: 06/03/2020

Supersedes: 20/12/2019

Version: 3.0

NSK-A1

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

#### 1.1. Product identifier

Product form : Mixtures  
Product name : LABELED AMINO ACID STANDARDS SET A1  
Product code : NSK-A1

#### 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

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

Full text of R-phrases: see section 16

##### GHS-US classification

Skin Irrit. 2 H315  
Eye Irrit. 2A H319

Full text of H statements : see section 16

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

No additional information available

#### 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

# LABELED AMINO ACID STANDARDS SET A1

NSK-A1

## 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

Precautionary statements (CLP) : P264 - Wash Both hands thoroughly after handling.  
P280 - Wear protective clothing, protective gloves.  
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.  
P337+P313 - If eye irritation persists: 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  
H319 - Causes serious eye irritation

Precautionary statements (GHS-US) : P264 - Wash Both hands thoroughly after handling.  
P280 - Wear eye protection, face protection, 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 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.

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	%	Classification according to Directive 67/548/EEC
GLYCINE (2-13C, 99%; 15N, 98%+)	(CAS-No.) 91795-59-4 (EC-No.) 200-272-2 (Unlabeled)	18.33	Not classified
L-ARGININE:HCL (5-13C, 99%; 4,4,5,5-D4, 95%)	(CAS-No.) 1119-34-2 (Unlabeled) (EC-No.) 214-275-1 (Unlabeled)	10.26	Xi; R36/38
L-TYROSINE (RING-13C6, 99%)	(CAS-No.) 201595-63-3 (EC-No.) 200-460-4 (Unlabeled)	8.9	Xi; R36/37/38
L-CITRULLINE (5,5-D2, 98%)	(CAS-No.) 372-75-8 (Unlabeled) (EC-No.) 206-759-6 (Unlabeled)	8.43	Not classified
L-PHENYLALANINE (RING-13C6, 99%)	(CAS-No.) 63-91-2 (Unlabeled) (EC-No.) 200-568-1	8.14	Not classified
L-METHIONINE (METHYL-D3, 98%)	(CAS-No.) 13010-53-2 (EC-No.) 200-562-9 (Unlabeled)	7.24	Not classified
DL-GLUTAMIC ACID (2,4,4-D3, 98%)	(CAS-No.) 96927-56-9 (EC-No.) 210-522-2 (Unlabeled)	7.14	Not classified
L-ASPARTIC ACID (2,3,3-D3, 98%)	(CAS-No.) 3842-25-9 (EC-No.) 200-291-6 (Unlabeled)	6.48	Not classified
L-LEUCINE (5,5,5-D3, 99%)	(CAS-No.) 87828-86-2 (EC-No.) 200-522-0 (Unlabeled)	6.38	Not classified
L-VALINE (D8, 98%)	(CAS-No.) 35045-72-8 (EC-No.) 200-773-6 (Unlabeled)	5.96	Not classified
L-ALANINE (2,3,3,3-D4, 98%)	(CAS-No.) 18806-29-6 (EC-No.) 200-273-8 (Unlabeled)	4.43	Not classified
L-ORNITHINE:HCL (3,3,4,4,5,5-D6, 98%)	(CAS-No.) 347841-40-1 (EC-No.) 221-678-6 (Unlabeled)	1.31	Xi; R36

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
GLYCINE (2-13C, 99%; 15N, 98%+)	(CAS-No.) 91795-59-4 (EC-No.) 200-272-2 (Unlabeled)	18.33	Not classified
L-ARGININE:HCL (5-13C, 99%; 4,4,5,5-D4, 95%)	(CAS-No.) 1119-34-2 (Unlabeled) (EC-No.) 214-275-1 (Unlabeled)	10.26	Skin Irrit. 2, H315 Eye Irrit. 2, H319

# LABELED AMINO ACID STANDARDS SET A1

NSK-A1

## 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

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
L-TYROSINE (RING-13C6, 99%)	(CAS-No.) 201595-63-3 (EC-No.) 200-460-4 (Unlabeled)	8.9	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335
L-CITRULLINE (5,5-D2, 98%)	(CAS-No.) 372-75-8 (Unlabeled) (EC-No.) 206-759-6 (Unlabeled)	8.43	Not classified
L-PHENYLALANINE (RING-13C6, 99%)	(CAS-No.) 63-91-2 (Unlabeled) (EC-No.) 200-568-1	8.14	Not classified
L-METHIONINE (METHYL-D3, 98%)	(CAS-No.) 13010-53-2 (EC-No.) 200-562-9 (Unlabeled)	7.24	Not classified
DL-GLUTAMIC ACID (2,4,4-D3, 98%)	(CAS-No.) 96927-56-9 (EC-No.) 210-522-2 (Unlabeled)	7.14	Not classified
L-ASPARTIC ACID (2,3,3-D3, 98%)	(CAS-No.) 3842-25-9 (EC-No.) 200-291-6 (Unlabeled)	6.48	Not classified
L-LEUCINE (5,5,5-D3, 99%)	(CAS-No.) 87828-86-2 (EC-No.) 200-522-0 (Unlabeled)	6.38	Not classified
L-VALINE (D8, 98%)	(CAS-No.) 35045-72-8 (EC-No.) 200-773-6 (Unlabeled)	5.96	Not classified
L-ALANINE (2,3,3,3-D4, 98%)	(CAS-No.) 18806-29-6 (EC-No.) 200-273-8 (Unlabeled)	4.43	Not classified
L-ORNITHINE:HCL (3,3,4,4,5,5-D6, 98%)	(CAS-No.) 347841-40-1 (EC-No.) 221-678-6 (Unlabeled)	1.31	Eye Irrit. 2, H319

Name	Product identifier	%	GHS-US classification
GLYCINE (2-13C, 99%; 15N, 98%+)	(CAS-No.) 91795-59-4	18.33	Not classified
L-ARGININE:HCL (5-13C, 99%; 4,4,5,5-D4, 95%)	(CAS-No.) 1119-34-2 (Unlabeled)	10.26	Skin Irrit. 2, H315 Eye Irrit. 2A, H319
L-TYROSINE (RING-13C6, 99%)	(CAS-No.) 201595-63-3	8.9	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335
L-CITRULLINE (5,5-D2, 98%)	(CAS-No.) 372-75-8 (Unlabeled)	8.43	Not classified
L-PHENYLALANINE (RING-13C6, 99%)	(CAS-No.) 63-91-2 (Unlabeled)	8.14	Not classified
L-METHIONINE (METHYL-D3, 98%)	(CAS-No.) 13010-53-2	7.24	Not classified
DL-GLUTAMIC ACID (2,4,4-D3, 98%)	(CAS-No.) 96927-56-9	7.14	Not classified
L-ASPARTIC ACID (2,3,3-D3, 98%)	(CAS-No.) 3842-25-9	6.48	Not classified
L-LEUCINE (5,5,5-D3, 99%)	(CAS-No.) 87828-86-2	6.38	Not classified
L-VALINE (D8, 98%)	(CAS-No.) 35045-72-8	5.96	Not classified
L-ALANINE (2,3,3,3-D4, 98%)	(CAS-No.) 18806-29-6	4.43	Not classified
L-ORNITHINE:HCL (3,3,4,4,5,5-D6, 98%)	(CAS-No.) 347841-40-1	1.31	Eye Irrit. 2A, H319

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

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general	: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	: Allow victim to breathe fresh air. Allow the victim to rest.
First-aid measures after skin contact	: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: When symptoms occur: rinse immediately with plenty of water. Get medical advice/attention. Specific treatment (see First aid measures on this label).
First-aid measures after eye contact	: Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

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

Symptoms/effects after inhalation	: May cause respiratory irritation.
Symptoms/effects after skin contact	: Causes skin irritation.
Symptoms/effects after eye contact	: Causes serious eye irritation.
Symptoms/effects 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	: Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	: Do not use a heavy water stream.

# LABELED AMINO ACID STANDARDS SET A1

NSK-A1

## 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

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

No additional information available

### 5.3. 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.

## SECTION 6: Accidental release measures

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

#### 6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

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

Methods for cleaning up : On land, sweep or shovel into suitable containers. Minimize generation of dust. Store away from other materials.

### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

## 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 Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work thoroughly after handling.

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

Storage conditions : Store less than or equal to 25°C. Protect from light.

Incompatible products : Strong bases. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight.

### 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

Personal protective equipment : Avoid all unnecessary exposure. Gloves. Self-contained breathing apparatus. Protective clothing. Protective goggles.



Hand protection : Wear protective gloves.

Eye protection : Chemical goggles or safety glasses.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : Wear appropriate mask.

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

Color : Colorless

Odor : Characteristic

# LABELED AMINO ACID STANDARDS SET A1

NSK-A1

## 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

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
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Non flammable
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
Oxidizing properties	: No data available
Explosion 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

Four years from date of manufacture.

### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

### 10.5. Incompatible materials

Strong acids. Strong bases.

### 10.6. Hazardous decomposition products

Fume, Carbon monoxide, Carbon dioxide.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

<b>L-ALANINE (2,3,3,3-D4, 98%) (18806-29-6)</b>	
LD50 oral rat	> 5110 mg/kg male and female
<b>L-ORNITHINE:HCL (3,3,4,4,5,5-D6, 98%) (347841-40-1)</b>	
LD50 oral rat	10000 mg/kg Remarks: Behavioral: Altered sleep time (including change in righting reflex). Behavioral: Ataxia. Lungs, Thorax, or Respiration: Dyspnea.
ATE CLP (oral)	10000.000 mg/kg body weight
<b>L-ASPARTIC ACID (2,3,3-D3, 98%) (3842-25-9)</b>	
LD50 oral rat	5000 mg/kg
LD50 dermal rabbit	5000 mg/kg
ATE CLP (oral)	500.000 mg/kg body weight
ATE CLP (dermal)	1100.000 mg/kg body weight
<b>L-METHIONINE (METHYL-D3, 98%) (13010-53-2)</b>	
LD50 oral rat	36000 mg/kg Remarks: Behavioral: Change in motor activity (specific assay). Skin and Appendages: Allergic (Multiple organ involvement) Anaphylaxix.

# LABELED AMINO ACID STANDARDS SET A1

NSK-A1

## 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

<b>L-LEUCINE (5,5,5-D3, 99%) (87828-86-2)</b>	
LD50 oral rat	> 16000 mg/kg male and female
LD50 Intraperitoneal - Rat - 5,379 mg/kg Remarks	Lungs, Thorax, or Respiration: Dyspnea. Nutritional and Gross Metabolic: Changes in: Body temperature decrease.
<b>L-VALINE (D8, 98%) (35045-72-8)</b>	
LD50 oral rat	> 2000 mg/kg Rat female - (OECD Test Guideline 423)
LD50 dermal rat	5390 mg/kg
LC50 inhalation rat (mg/l)	> 5260 mg/m <sup>3</sup> (OECD Test Guideline 403)
ATE CLP (dermal)	5390.000 mg/kg body weight
<b>GLYCINE (2-13C, 99%; 15N, 98%+) (91795-59-4)</b>	
LD50 oral rat	7930 mg/kg
ATE CLP (oral)	7930.000 mg/kg body weight
<b>L-ARGININE:HCL (5-13C, 99%; 4,4,5,5-D4, 95%) (1119-34-2 (Unlabeled))</b>	
LD50 oral rat	12400 mg/kg
ATE CLP (oral)	12000.000 mg/kg body weight

<b>L-TYROSINE (RING-13C6, 99%) (201595-63-3)</b>	
Additional information	LD50 Intraperitoneal - mouse - > 1,450 mg/kg
Skin corrosion/irritation	: Causes skin irritation. Causes skin irritation
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity – single exposure	: Not classified
Specific target organ toxicity – repeated exposure	: Not classified

<b>L-LEUCINE (5,5,5-D3, 99%) (87828-86-2)</b>	
NOAEL (oral,rat,90 days)	3840 mg/kg bodyweight/day female
Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.
Symptoms/effects after inhalation	: May cause respiratory irritation.
Symptoms/effects after skin contact	: Causes skin irritation.
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

<b>L-ALANINE (2,3,3,3-D4, 98%) (18806-29-6)</b>	
EC50 Daphnia 1	> 100 mg/l static test EC50 - Daphnia magna (Water flea) - 48 h (OECD Test Guideline 202)
<b>L-VALINE (D8, 98%) (35045-72-8)</b>	
LC50 fish 1	> 10 g/l Danio rerio (zebra fish) - (OECD Test Guideline 203) - 96 h
EC50 Daphnia 1	> 10 g/l Daphnia magna (Water flea) - (OECD Test Guideline 202) - 24 h

### 12.2. Persistence and degradability

<b>L-VALINE (D8, 98%) (35045-72-8)</b>	
Persistence and degradability	Aerobic - exposure time: 28 d.

### 12.3. Bioaccumulative potential

<b>L-ALANINE (2,3,3,3-D4, 98%) (18806-29-6)</b>	
Log Pow	-2.74 at 20 °C (68 °F)
<b>L-VALINE (D8, 98%) (35045-72-8)</b>	
Log Pow	-2.259 at 20 °C (68 °F)

# LABELED AMINO ACID STANDARDS SET A1

NSK-A1

## 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-TYROSINE (RING-13C6, 99%) (201595-63-3)

Log Pow -2.26 at 25 °C (77 °F)

#### 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.

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

#### LABELED AMINO ACID STANDARDS SET A1

SARA Section 302 Threshold Planning Quantity (TPQ) SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA Section 313 - Emission Reporting Not subject to reporting requirements of the United States SARA Section 313

#### L-ALANINE (2,3,3,3-D4, 98%) (18806-29-6)

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

# LABELED AMINO ACID STANDARDS SET A1

NSK-A1

## 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

<b>L-ORNITHINE:HCL (3,3,4,4,5,5-D6, 98%) (347841-40-1)</b>	
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313
<b>L-ASPARTIC ACID (2,3,3-D3, 98%) (3842-25-9)</b>	
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313
<b>DL-GLUTAMIC ACID (2,4,4-D3, 98%) (96927-56-9)</b>	
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313
<b>L-CITRULLINE (5,5-D2, 98%) (372-75-8 (Unlabeled))</b>	
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
<b>L-PHENYLALANINE (RING-13C6, 99%) (63-91-2 (Unlabeled))</b>	
SARA Section 302 Threshold Planning Quantity (TPQ)	SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313
<b>L-METHIONINE (METHYL-D3, 98%) (13010-53-2)</b>	
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
<b>L-LEUCINE (5,5,5-D3, 99%) (87828-86-2)</b>	
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.
<b>L-VALINE (D8, 98%) (35045-72-8)</b>	
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
<b>GLYCINE (2-13C, 99%; 15N, 98%+) (91795-59-4)</b>	
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
<b>L-ARGININE:HCL (5-13C, 99%; 4,4,5,5-D4, 95%) (1119-34-2 (Unlabeled))</b>	
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313
<b>L-TYROSINE (RING-13C6, 99%) (201595-63-3)</b>	
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313

## 15.2. International regulations

### CANADA

<b>DL-GLUTAMIC ACID (2,4,4-D3, 98%) (96927-56-9)</b>	
Not listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	This document has been prepared in accordance with the SDS requirements of the WHMIS Controlled Products Regulation

### 15.2.1. National regulations

No additional information available

# LABELLED AMINO ACID STANDARDS SET A1 NSK-A1

## 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

### 15.3. US State regulations

LABELLED AMINO ACID STANDARDS SET A1()	
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. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

L-ALANINE (2,3,3,3-D4, 98%) (18806-29-6)				
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-ORNITHINE:HCL (3,3,4,4,5,5-D6, 98%) (347841-40-1)				
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-ASPARTIC ACID (2,3,3,3-D3, 98%) (3842-25-9)				
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	

DL-GLUTAMIC ACID (2,4,4-D3, 98%) (96927-56-9)				
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-CITRULLINE (5,5-D2, 98%) (372-75-8 (Unlabeled))				
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-PHENYLALANINE (RING-13C6, 99%) (63-91-2 (Unlabeled))				
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-METHIONINE (METHYL-D3, 98%) (13010-53-2)				
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-LEUCINE (5,5,5-D3, 99%) (87828-86-2)				
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	

# LABELED AMINO ACID STANDARDS SET A1

NSK-A1

## 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

<b>L-VALINE (D8, 98%) (35045-72-8)</b>				
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	
<b>GLYCINE (2-13C, 99%; 15N, 98%+) (91795-59-4)</b>				
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	
<b>L-ARGININE:HCL (5-13C, 99%; 4,4,5,5-D4, 95%) (1119-34-2 (Unlabeled))</b>				
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	
<b>L-TYROSINE (RING-13C6, 99%) (201595-63-3)</b>				
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	
<b>L-ALANINE (2,3,3,3-D4, 98%) (18806-29-6)</b>				
<b>State or local regulations</b>				
U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List				
<b>L-ORNITHINE:HCL (3,3,4,4,5,5-D6, 98%) (347841-40-1)</b>				
<b>State or local regulations</b>				
U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List				
<b>L-ASPARTIC ACID (2,3,3-D3, 98%) (3842-25-9)</b>				
<b>State or local regulations</b>				
U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List				
<b>DL-GLUTAMIC ACID (2,4,4-D3, 98%) (96927-56-9)</b>				
<b>State or local regulations</b>				
U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List				
<b>L-CITRULLINE (5,5-D2, 98%) (372-75-8 (Unlabeled))</b>				
<b>State or local regulations</b>				
U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List				
<b>L-PHENYLALANINE (RING-13C6, 99%) (63-91-2 (Unlabeled))</b>				
<b>State or local regulations</b>				
U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List				
<b>L-METHIONINE (METHYL-D3, 98%) (13010-53-2)</b>				
<b>State or local regulations</b>				
U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List				
<b>L-LEUCINE (5,5,5-D3, 99%) (87828-86-2)</b>				
<b>State or local regulations</b>				
U.S. - Pennsylvania - RTK (Right to Know) List				

# LABELED AMINO ACID STANDARDS SET A1

NSK-A1

## 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

<b>L-LEUCINE (5,5,5-D3, 99%) (87828-86-2)</b>
U.S. - New Jersey - Right to Know Hazardous Substance List
<b>L-VALINE (D8, 98%) (35045-72-8)</b>
<b>State or local regulations</b>
U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List
<b>GLYCINE (2-13C, 99%; 15N, 98%+) (91795-59-4)</b>
<b>State or local regulations</b>
U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List
<b>L-ARGININE:HCL (5-13C, 99%; 4,4,5,5-D4, 95%) (1119-34-2 (Unlabeled))</b>
<b>State or local regulations</b>
U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List
<b>L-TYROSINE (RING-13C6, 99%) (201595-63-3)</b>
<b>State or local regulations</b>
U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List

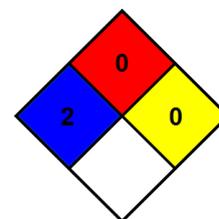
## SECTION 16: Other information

- Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.
- 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	Irritating to eyes
R36/37/38	Irritating to eyes, respiratory system and skin
R36/38	Irritating to eyes and skin
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*