Safety Data Sheet

20 Mix amino acids in water

Version：V2.0.0.1
Report No.：BWQ0664-2016-MSDS-US
Creation Date：2025/09/29
Revision Date：-

*Prepared according to American OSHA HCS-2024 (29 CFR 1910.1200)

1 Identification

Product identifier

Product Name	20 Mix amino acids in water
Cat No.	BWQ0664-2016
CAS No.	Not applicable
EC No.	Not applicable
Molecular Formula	Not applicable

Recommended use of the product and restrictions on use

Relevant identified uses	Please consult manufacturer.
Uses advised against	Please consult manufacturer.

Details of the supplier of the Safety Data Sheet

Name of the company	Weiyel Inc
Address of the company	Hedian Light Industrial Park, Chengguan Town, Shangcheng County, Xinyang City, Henan Province, China
Post code	465350
Telephone number	010-58103678
Fax number	010-84840368
E-mail address	info@weiyel.com

Emergency phone number

Emergency phone number	010-58103678

2 Hazard(s) identification

Hazard classification according to 29 CFR 1910.1200

Sensitization - skin	Category 1A

Label elements

Hazard pictograms	
Signal word	Warning

Hazard statements

H317	May cause an allergic skin reaction

Precautionary statements

◆ Prevention

P261	Avoid breathing gas/mist/vapour/spray.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

◆ Response

P321	Specific treatment (see related instructions on the label).
P302+P352	IF ON SKIN: Wash with plenty of water.
P362+P364	Take off contaminated clothing and wash it before reuse.

◆ Storage

Storage	Not applicable

◆ Disposal

P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards

	Not applicable.

Hazard description

◆ Physical and chemical hazards

	No information available

◆ Health hazards

Inhaled	Inhalation of the product may produce adverse health effects or irritation of the respiratory tract following discomfort.
Ingestion	Accidental ingestion of the product may be harmful to the health of the individual.
Skin Contact	Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects.
Eye	This product may cause temporary discomfort following direct contact with the eye.

◆ Environmental hazards

	Please refer to 12th chapter of SDS.

3 Composition/information on ingredients

Substance/mixture

	Mixture

Component	CAS No.	EC No.	Concentration (wt, %)
Water	7732-18-5	231-791-2	96.52
L-alanine	56-41-7	200-273-8	0.11
Arginine	74-79-3	200-811-1	0.22
Asparagine	70-47-3	200-735-9	0.17
Aspartic acid	56-84-8	200-291-6	0.17

Cystine	56-89-3	200-296-3	0.30
4-aminobutyric acid	56-12-2	200-258-6	0.13
Glutamic acid	56-86-0	200-293-7	0.18
Glycine	56-40-6	200-272-2	0.09
Histidine	71-00-1	200-745-3	0.19
L-isoleucine	73-32-5	200-798-2	0.16
L-leucine	61-90-5	200-522-0	0.16
L-lysine	56-87-1	200-294-2	0.18
L-methionine	63-68-3	200-562-9	0.19
L-PHENYLALANINE	15099-85-1	200-568-1	0.21
L-proline	147-85-3	205-702-2	0.14
L-serine	56-45-1	200-274-3	0.13
N-ethyl-L-glutamine	3081-61-6	221-379-0	0.22
L-threonine	72-19-5	200-774-1	0.15
Tyrosine	60-18-4	200-460-4	0.23
L-valine	72-18-4	200-773-6	0.15

4 First-aid measures

Description of first aid measures

General advice	Immediate medical attention is required. Show this safety data sheet (SDS) to the doctor in attendance.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician if feel uncomfortable.
Skin contact	Take off contaminated clothing and shoes immediately. Wash off with plenty of soap and water for at least 15 minutes and consult a physician if feel uncomfortable.
Ingestion	Never give anything by mouth to an unconscious person. Call a physician or Poison Control Center immediately.
Inhalation	Move victim into fresh air. If breathing is difficult, give oxygen. Do not use mouth to mouth resuscitation if victim ingested or inhaled the substance. If not breathing, give artificial respiration and consult a physician immediately.
Protecting of first-aiders	Ensure that medical personnel are aware of the substance involved. Take precautions to protect themselves and prevent spread of contamination.

Most important symptoms/effects, acute and delayed

1	Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.

Indication of any immediate medical attention and special treatment needed

1	Treat symptomatically.
2	Symptoms may be delayed.

5 Fire-fighting measures

Extinguishing media

Suitable extinguishing media	Use extinguishing media suitable for surrounding area.
Unsuitable extinguishing media	There is no restriction on the type of extinguisher which may be used.

Specific hazards arising from the substance or mixture

1	Development of hazardous combustion gases or vapor possible in the event of fire.
2	May expansion or decompose explosively when heated or involved in fire.

Special protective equipment and precautions for fire-fighters

1	As in any fire, wear self-contained breathing apparatus (MSHA/NIOSH approved or equivalent) and full protective gear.
2	Fight fire from a safe distance, with adequate cover.
3	Prevent fire extinguishing water from contaminating surface water or the ground water system.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

1	Use personal protective equipment,do not breathe gas/mist/vapour/spray.
2	Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges.
3	Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Environmental precautions

1	Prevent further leakage or spillage if safe to do so.
2	Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up

1	Cut off the source of the leak as much as possible.
2	Keep leaks in a ventilated place.
3	Absorb spilled material in dry sand or inert absorbent. In case of large amount of spillage, contain a spill by bunding.
4	Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.
5	Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container.

7 Handling and storage

Precautions for safe handling

1	Handling is performed in a well ventilated place.
2	Wear suitable protective equipment.
3	Avoid contact with skin and eyes.
4	Keep away from heat/sparks/open flames/ hot surfaces.

Conditions for safe storage, including any incompatibilities

1	Keep containers tightly closed.
2	Keep containers in a dry, cool and well-ventilated place.
3	Keep away from heat/sparks/open flames/hot surfaces.
4	Store away from incompatible materials and foodstuff containers.

8 Exposure controls/personal protection

Control parameters

◆Occupational exposure limit values

Occupational Exposure limit values	No relevant regulations

Engineering controls

1	Ensure adequate ventilation, especially in confined areas.
2	Ensure that eyewash stations and safety showers are close to the workstation location.
3	Use explosion-proof electrical/ventilating/lighting/equipment.
4	Set up emergency exit and necessary risk-elimination area.

Personal protection equipment

General requirement	
Eye protection	Must wear appropriate safety goggles.
Hand protection	Must wear appropriate chemical protective gloves.
Respiratory protection	Must wear appropriate personal respiratory protective equipment.
Skin and body protection	Must wear appropriate chemical protective clothing and chemical resistant shoes.

9 Physical and chemical properties and safety characteristics

Physical and chemical properties

Appearance (physical state, color, etc.)	Clear, colorless liquid
Odor	No information available
Odor threshold	No information available
pH	7.00 (20°C,Water)
Melting point/freezing point(°C)	0 (Water)
Initial boiling point and boiling range(°C)	100 (Water)
Flash point(Closed cup,°C)	No information available
Evaporation rate	No information available
Flammability	No information available
Upper/lower explosive limits[%(v/v)]	Upper limit : No information available ; Lower limit : No information available
Vapor pressure	2.33kPa (20°C,Water)
Vapor density(Air = 1)	> 1 (Water)
Relative density(Water=1)	1 (3.9°C,Water)
Solubility	No information available
n-octanol/water partition coefficient	No information available
Auto-ignition temperature(°C)	No information available
Decomposition temperature(°C)	No information available
Kinematic viscosity	No information available

10 Stability and reactivity

Stability and reactivity

Reactivity	Contact with incompatible substances can cause decomposition or other chemical reactions.
Chemical stability	Stable under proper operation and storage conditions.
Possibility of hazardous reactions	In contact with active metals (alkali metals, Na, Ca etc.) causes a reaction and release hydrogen.
Conditions to avoid	Incompatible materials, heat, flame and spark.
Incompatible materials	Alkali, sodium, calcium, and other active metal, halogen, metal oxide, nonmetal oxide, acyl halide and metal phosphide.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11 Toxicological information

Acute toxicity

Component	LD_{50}(oral)	LD_{50}(dermal)	LC_{50}(inhalation,4h)
Glycine	7930mg/kg(Rat)	No information available	No information available
Histidine	> 15000mg/kg(Rat)	No information available	No information available
Glutamic acid	> 30000mg/kg(Rat)	No information available	No information available
4-aminobutyric acid	12680mg/kg(Mouse)	No information available	No information available
L-methionine	36000mg/kg(Rat)	No information available	No information available

Carcinogenicity

Component	List of carcinogens by the IARC Monographs	Report on Carcinogens by NTP	OSHA Carcinogen List
Water	Not Listed	Not Listed	Not Listed
L-alanine	Not Listed	Not Listed	Not Listed
Arginine	Not Listed	Not Listed	Not Listed
Asparagine	Not Listed	Not Listed	Not Listed
Aspartic acid	Not Listed	Not Listed	Not Listed
Cystine	Not Listed	Not Listed	Not Listed
4-aminobutyric acid	Not Listed	Not Listed	Not Listed
Glutamic acid	Not Listed	Not Listed	Not Listed
Glycine	Not Listed	Not Listed	Not Listed
Histidine	Not Listed	Not Listed	Not Listed
L-isoleucine	Not Listed	Not Listed	Not Listed
L-leucine	Not Listed	Not Listed	Not Listed
L-lysine	Not Listed	Not Listed	Not Listed
L-methionine	Not Listed	Not Listed	Not Listed
L-PHENYLALANINE	Not Listed	Not Listed	Not Listed

L-proline	Not Listed	Not Listed	Not Listed
L-serine	Not Listed	Not Listed	Not Listed
N-ethyl-L-glutamine	Not Listed	Not Listed	Not Listed
L-threonine	Not Listed	Not Listed	Not Listed
Tyrosine	Not Listed	Not Listed	Not Listed
L-valine	Not Listed	Not Listed	Not Listed

Others

20 Mix amino acids in water	
Skin corrosion/irritation	Based on available data, the classification criteria are not met
Serious eye damage/irritation	Based on available data, the classification criteria are not met
Skin sensitization	May cause an allergic skin reaction(Category 1A)
Respiratory sensitization	Based on available data, the classification criteria are not met
Reproductive toxicity	Based on available data, the classification criteria are not met
STOT-repeated exposure	Based on available data, the classification criteria are not met
Aspiration hazard	Based on available data, the classification criteria are not met
Germ cell mutagenicity	Based on available data, the classification criteria are not met

12 Ecological information

Acute aquatic toxicity

Component	Fish	Crustaceans	Algae or other aquatic plants
Aspartic acid	LC_{50} :113mg/L (96h)(Fish)	No information available	No information available
Glycine	LC_{50} : 1000mg/L (96h)(Fish)	No information available	No information available
Asparagine	LC_{50} : 1690000mg/L (96h)(Fish)	No information available	No information available
L-alanine	LC_{50} : 26300mg/L (96h)(Fish)	No information available	No information available
Histidine	No information available	EC_{50} : > 100mg/L (48h)(Crustaceans)	ErC_{50} : > 100mg/L (72h)(Algae)
L-isoleucine	LC_{50} : > 11200mg/L (96h)(Fish)	No information available	No information available
Tyrosine	No information available	EC_{50} : > 100mg/L (48h)(Crustaceans)	ErC_{50} : > 63.2mg/L (72h)(Algae)
Glutamic acid	LC_{50} : > 100mg/L (96h)(Fish)	EC_{50} : > 83.14mg/L (48h)(Crustaceans)	ErC_{50} : 68.5mg/L (72h)(Algae)
Arginine	LC_{50} : 2800mg/L (96h)(Fish)	No information available	No information available
L-methionine	LC_{50} : 1600mg/L (96h)(Fish)	No information available	No information available
L-proline	LC_{50} : 10500mg/L (96h)(Fish)	No information available	No information available

Chronic aquatic toxicity

Chronic aquatic toxicity	No information available

Persistence and degradability

Component	Persistence (water/soil)	Persistence (air)
L-alanine	Low	Low
Arginine	Low	Low
Asparagine	Low	Low
Aspartic acid	Low	Low
4-aminobutyric acid	Low	Low
Glutamic acid	Low	Low
Glycine	Low	Low
Histidine	High	High
L-isoleucine	High	High
L-leucine	High	High
L-proline	Low	Low
L-serine	Low	Low
L-threonine	Low	Low
Tyrosine	High	High
L-valine	High	High

Bioaccumulative potential

Component	Bioaccumulative potential	Comments
L-alanine	Low	Log Kow=-2.9904
Arginine	Low	Log Kow=-4.2
Asparagine	Low	Log Kow=-3.82
Aspartic acid	Low	Log Kow=-3.89
4-aminobutyric acid	Low	Log Kow=-3.17
Glutamic acid	Low	Log Kow=-3.69
Glycine	Low	Log Kow=-3.21
Histidine	Low	Log Kow=-3.32
L-isoleucine	Low	Log Kow=-1.7
L-leucine	Low	Log Kow=-1.52
L-lysine	Low	Log Kow=-3.05
L-proline	Low	Log Kow=-2.54
L-serine	Low	Log Kow=-3.07
L-threonine	Low	Log Kow=-2.94
Tyrosine	Low	Log Kow=-1.7628
L-valine	Low	Log Kow=-2.26

Mobility in soil

Component	log Koc	Remark
L-alanine	-1.44	20 ℃
Arginine	1.319	
Asparagine	0.083	
Aspartic acid	-0.58	20 ℃
4-aminobutyric acid	0.487	
Glutamic acid	-1.92082	
Glycine	0.000	
Histidine	-1.304	log Kow method
L-isoleucine	-0.817	log Kow method
L-leucine	-0.707	log Kow method
L-proline	-1.29	20 ℃
L-serine	-1.976	
L-threonine	0.000	
Tyrosine	1.987	
L-valine	-1.11	20 ℃

13 Disposal considerations

Disposal considerations

Waste chemicals	Before disposal should refer to the relevant national and local laws and regulation. Recommend the use of incineration disposal.
Contaminated packaging	Containers may still present chemical hazard when empty. Keep away from hot and ignition source of fire. Return to supplier for recycling if possible.
Disposal recommendations	Refer to section waste chemicals and contaminated packaging.

14 Transport information

Label and Mark

Transporting Label	Not applicable

IMDG-CODE

IMDG-CODE	NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

IATA-DGR

IATA-DGR	NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

UN-ADR

UN-ADR	NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Transport in bulk according to IMO instruments

◆ Transport in bulk according to Annex II of MARPOL and the IBC code

	Not Available

◆ Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

	Not Available

◆Transport in bulk in accordance with the IGC Code

	Not Available

Others

Precautions for transport	Transport vehicles should be equipped with the appropriate variety and quantity of fire equipment and emergency equipment leakage during transport. Before transport, should be preceded by checking whether container integrity, sealing. The transport unit must be placarded and marked in accordance with relevant transporting requirements.

15 Regulatory information

International chemical inventory

Component	A	B	C	D	E	F	G	H	I	J	K	L	M
Water	√	√	√	√	√	√	√	√	√	√	√	√	√
L-alanine	√	√	√	√	√	√	√	√	√	√	√	√	√
Arginine	√	√	√	√	√	√	√	√	√	×	√	√	√
Asparagine	√	√	√	√	√	√	√	√	√	×	×	√	√
Aspartic acid	√	√	√	√	√	√	√	√	√	×	√	√	√
Cystine	√	√	√	√	√	√	√	√	√	×	×	√	√
4-aminobutyric acid	√	√	√	×	√	√	×	√	√	×	√	√	√
Glutamic acid	√	√	√	√	√	√	√	√	√	√	√	√	√
Glycine	√	√	√	√	√	√	√	√	√	√	√	√	√
Histidine	√	√	√	√	√	√	√	√	√	√	√	√	√
L-isoleucine	√	√	√	√	√	√	√	√	√	√	√	√	√
L-leucine	√	√	√	√	√	√	×	√	√	×	√	√	√
L-lysine	√	√	√	√	√	√	√	√	√	×	√	√	√
L-methionine	√	√	√	√	√	√	√	√	√	×	√	√	√
L-PHENYLALANINE	×	×	×	×	×	×	×	×	×	×	×	×	×
L-proline	√	√	√	√	√	√	√	√	√	×	×	√	√
L-serine	√	√	√	√	√	√	√	√	√	√	√	√	√
N-ethyl-L-glutamine	×	√	×	×	×	×	×	×	×	×	√	√	√
L-threonine	√	√	√	√	√	√	√	√	√	√	√	√	√
Tyrosine	√	√	√	√	√	√	√	√	√	×	×	√	√
L-valine	√	√	√	√	√	√	√	√	√	√	√	√	√

【A】 China Inventory of Existing Chemical Substances(IECSC)
【B】 European Inventory of Existing Commercial Chemical Substances(EC inventory)
【C】 United States Toxic Substances Control Act Inventory(TSCA)
【D】 Canadian Domestic Substances List(DSL)
【E】 New Zealand Inventory of Chemicals(NZIoC)
【F】 Philippines Inventory of Chemicals and Chemical Substances(PICCS)
【G】 Korea Existing Chemicals Inventory(KECL)

【H】 Australian. Inventory of Industrial Chemical (AIICS)
【I】 Japan Inventory of Existing & New Chemical Substances(ENCS)
【J】 Thailand Existing Chemicals Inventory(TECI)
【K】 Mexico National Inventory of Chemical Substances (INSQ)
【L】 Russia Inventory of Existing Substances (DRAFT)
【M】 Inventory of Existing Chemical Substances in Taiwan, China (TCSI)

List of Chemical Substances under International Conventions

Component	A	B	C
Water	×	×	×
L-alanine	×	×	×
Arginine	×	×	×
Asparagine	×	×	×
Aspartic acid	×	×	×
Cystine	×	×	×
4-aminobutyric acid	×	×	×
Glutamic acid	×	×	×
Glycine	×	×	×
Histidine	×	×	×
L-isoleucine	×	×	×
L-leucine	×	×	×
L-lysine	×	×	×
L-methionine	×	×	×
L-PHENYLALANINE	×	×	×
L-proline	×	×	×
L-serine	×	×	×
N-ethyl-L-glutamine	×	×	×
L-threonine	×	×	×
Tyrosine	×	×	×
L-valine	×	×	×

【A】 The Montreal Protocol on Substances that Deplete the Ozone Layer
【B】 Stockholm Convention on Persistent Organic Pollutants (POPs)
【C】 Rotterdam Convention on the prior informed consent procedure for certain hazardous chemicals and pesticides in international trade

US chemical inventory

Component	A	B	C	D	E	F	G	H
Water	×	×	×	×	×	×	×	×
L-alanine	×	×	×	×	×	×	×	×
Arginine	×	×	×	×	×	×	×	×
Asparagine	×	×	×	×	×	×	×	×
Aspartic acid	×	×	×	×	×	×	×	×

Cystine	×	×	×	×	×	×	×	×
4-aminobutyric acid	×	×	×	×	×	×	×	×
Glutamic acid	×	×	×	×	×	×	×	×
Glycine	×	×	×	×	×	×	×	×
Histidine	×	×	×	×	×	×	×	×
L-isoleucine	×	×	×	×	×	×	×	×
L-leucine	×	×	×	×	×	×	×	×
L-lysine	×	×	×	×	×	×	×	×
L-methionine	×	×	×	×	×	×	×	×
L-PHENYLALANINE	×	×	×	×	×	×	×	×
L-proline	×	×	×	×	×	×	×	×
L-serine	×	×	×	×	×	×	×	×
N-ethyl-L-glutamine	×	×	×	×	×	×	×	×
L-threonine	×	×	×	×	×	×	×	×
Tyrosine	×	×	×	×	×	×	×	×
L-valine	×	×	×	×	×	×	×	×

[A] US Clean Air Act (CAA)- Section 112, Hazardous Air Pollutants
[B] US SARA 302- Extremely Hazardous Substance List
[C] US CERCLA- Hazardous Substances List
[D] US Massachusetts Right-to-Know Substance List
[E] US New Jersey Right to Know Hazardous Substance List
[F] US Pennsylvania Right to Know Hazardous Substance List
[G] US New York City Right-to-Know Hazardous Substance List
[H] US California Proposition 65 List

Note:
"√" Indicates that the substance included in the regulations.
"×" No data or not included in the regulations.

16 Other information

Information on revision

Creation Date	2025/09/29
Revision Date	-
Reason for revision	-

Reference

[1] IPCS: The International Chemical Safety Cards (ICSC), website: http://www.ilo.org/dyn/icsc/showcard.home.
[2] IARC, website: http://www.iarc.fr/.
[3] OECD: The Global Portal to Information on Chemical Substances, website: https://www.echemportal.org/echemportal/.
[4] CAMEO Chemicals, website: http://cameochemicals.noaa.gov/search/simple.
[5] NLM: ChemIDplus, website: http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp.
[6] EPA: Integrated Risk Information System, website: http://cfpub.epa.gov/iris/.
[7] U.S. Department of Transportation: ERG, website: http://www.phmsa.dot.gov/hazmat/library/erg.
[8] Germany GESTIS-database on hazard substance, website: http://gestis-en.itrust.de/.

Abbreviations and acronyms

CAS Chemical Abstracts Service UN The United Nations

PC-STEL	Short term exposure limit	OECD	Organization for Economic Co-operation and Development
PC-TWA	Time Weighted Average	IMDG-CODE	International Maritime Dangerous Goods CODE
MAC	Maximum Allowable Concentration	IARC	International Agency for Research on Cancer
DNEL	Derived No Effect Level	ICAO	International Civil Aviation Organization
PNEC	Predicted No Effect Concentration	IATA	International Air Transportation Association
NOEC	No Observed Effect Concentration	ACGIH	American Conference of Governmental Industrial Hygienists
LC_{50}	Lethal Concentration 50%	NFPA	National Fire Protection Association
LD_{50}	Lethal Dose 50%	NTP	National Toxicology Program
EC_{50}	Effective Concentration 50%	PBT	Persistent, Bioaccumulative, Toxic
EC_X	Effective Concentration X%	vPvB	very Persistent, very Bioaccumulative
P_{OW}	Partition coefficient Octanol: Water	CMR	Carcinogens, mutagens or substances toxic to reproduction
BCF	Bioconcentration factor	RPE	Respiratory Protective Equipment
ED	Endocrine disruptor	HCS	Hazard Communication Standard

Disclaimer

This Safety Data Sheet (SDS) was prepared according to OSHA HCS-2024. The data included was derived from international authoritative database and provided by the enterprise. Other information was based on the present state of our knowledge. We try to ensure the correctness of all information. However, due to the diversity of information sources and the limitations of our knowledge, this document is only for user's reference. Users should make their independent judgment of suitability of this information for their particular purposes. We do not assume responsibility for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.