

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier :

Product Name Nisin/Nisine

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

Recommended Use Food industry.

1.3. Details of the supplier of the safety data sheet

Manufacturer / Supplier : Luoyang Chihon biotechnology Co. LTD.

Address: No. 11 Qingling Rd. Industry zone, Luolang city, China

Tel: +86 379 64385550

Fax: +86 379 64382868

E-mail: chihon@chihonbio.com

Section 2: COMPOSITION / INFORMATION ON INGREDIENTS:

Ingredients:	CAS-No.	EINECS-No.	Classification
Nisin	1414-45-5	215-807-5	None.
Sodium chloride	764714-5	231-598-3	None.

Section 3: DESCRIPTION OF HAZARDS:

3.1 Classification of the substance or mixture

Regulation (EC) No 1272/2008 Not classified

This product is not classified as dangerous according to the CLP Regulation (EC) No 1272/2008.

3.2. Label elements

Not hazardous

3.3. Other hazards

Properties Affecting Health None known

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

Eye Contact Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Skin Contact Wash skin with soap and water.

Ingestion Clean mouth with water and drink afterwards plenty of water. Get medical attention immediately if symptoms occur.

Inhalation Remove person to fresh air. .

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

No information available.

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

Section 5: FIRE FIGHTING MEASURES

5.1. Extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Extinguishing media which must

not be used for safety reasons High volume water jet.

5.2. Special hazards arising from the substance or mixture

None in particular.

5.3. Advice for firefighters

For personal protection see section 8.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. For personal protection see section 8.

6.2. Environmental precautions

No information available.

6.3. Methods and material for containment and cleaning up

Sweep up and shovel into suitable containers for disposal. Clean thoroughly with suitable detergent. After cleaning, flush away traces with water.

6.4. Reference to other sections

Use personal protection recommended in Section 8.

Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Ensure adequate ventilation. Avoid dust formation in confined areas.

7.2. Conditions for safe storage, including any incompatibilities

Keep/store only in original container. Keep cool. Protect from sunlight.

7.3. Specific end use(s)

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure Limits

Chemical Name	UK WEL	UK MEL	Ireland	Germany	France
Sodium Chloride	—	—	—	—	—
Nisin	—	—	—	—	—
Chemical Name	Denmark	Finland	Norway	Sweden	The Netherlands
Sodium Chloride	—	—	—	—	—
Nisin	—	—	—	—	—
Chemical Name	Italy	Portugal	Spain	Austria	Switzerland
Sodium Chloride	—	—	—	—	—
Nisin	—	—	—	—	—
Chemical Name	Russia	Estonia	Latvia	Lithuania	Poland
Sodium Chloride	—	—	TWA 5mg/m3	IPRV5 mg/m3	—
Nisin	—	—	—	—	—

DNEL/DMEL - Workers

DNEL/DMEL - General population

8.2. Exposure controls

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

Engineering Measures Any equipment used to handle this product should be designated to minimize the escape of aerosols and vapours.

Personal protective equipment

Respiratory Protection Not required under normal use. In case of insufficient ventilation Half mask with a particle filter P2 (EN 143).

Eye Protection Wear safety glasses with side shields (or goggles).

Skin and Body Protection Wear protective gloves and protective clothing.

Hand Protection Nitril, vinyl or other impermeable gloves.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical State	solid (powder)
Appearance	Off-white to light tan.
Odour	Mild Organic
Odour Threshold	No information available
pH	3.3 - 3.8 (10 % suspension)
Flash Point	No information available
Boiling point / boiling range	No information available
Autoignition Temperature	No information available
Vapour Pressure	No information available
Viscosity	No information available
Partition Coefficient (n-octanol/water)	No information available
Evaporation Rate	No information available
Flammability Limits in Air	No information available

Section 10: STABILITY AND REACTIVITY

10.1. Reactivity No data available

10.2. Chemical stability Stable under normal conditions

10.3. Possibility of hazardous reactions

10.4. Conditions to avoid Extremes of temperature and direct sunlight Avoid dust formation

10.5. Incompatible materials None

10.6. Hazardous decomposition products None

Section 11: TOXICOLOGY INFORMATION

Product Information

Acute Toxicity

Ingestion Toxicity Not expected

Dermal No data available

Inhalation No data available

Irritation

Skin irritation No data available

Eye irritation No data available

Respiratory irritation No data available

Systemic Toxicity No data available

Mutagenic effects No data available

Carcinogenicity No data available

Reproductive effects No data available

Component Information Classification based on data available for ingredients

Sodium Chloride

Oral LD50/oral/rat 3000 mg/kg

Dermal	LD50/dermal/rabbit > 10000 mg/kg.
Inhalation	LC50/inhalation/1h/rat 42000 mg/m3.
Eye irritation	Moderate eye irritation
Skin irritation	Mild skin irritation
Mutagenic effects	Negative in the Ames test.

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

This product is not classified as dangerous to the environment according to the CLP Regulation (EC) No 1272/2008. (During the transitional period the Dangerous Substance Directive 67/568/EEC and the Preparation Directive 99/45/EC, remains applicable).

12.2. Persistence and degradability Persistence and degradability

Product is biodegradable.

12.3. Bioaccumulative potential Bioaccumulative potential

Bioaccumulation is unlikely.

12.4. Mobility in soil Mobility in soil

Will likely be mobile in the environment due to its water solubility but will likely degrade over time.

12.5. Results of PBT and vPvB assessment Results of PBT and vPvB assessment

The components in this formulation do not meet the criteria for classification as PBT or vPvB.

12.6. Other adverse effects

None known.

Component Information		Based on data available for ingredients		
Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to daphnia	Biodegradation
Sodium Chloride	EC50/72h/algae	LC50/96h/bluegill sunfish	LC50/48h/daphnia	No data
	4967 mg/l.	9675 mg/l.	=1000 mg/l.	

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations.

Contaminated Packaging Dispose of empty containers and wastes safely. Dispose of waste product or used containers according to local regulations.

Section 14: TRANSPORTATION INFORMATION

- 14.1. UN number Not regulated
- 14.2 UN proper shipping name Not regulated
- 14.3. Transport hazard class(es) Not regulated
- 14.4. Packing group Not regulated
- 14.5. Environmental hazards Not regulated
- 14.6. Special precautions for user Not regulated
- 14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
Not regulated

Section 15: REGULATORY INFORMATION

- 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Chemical Name	TA Luft List(Germany)	Occupational Illnesses (R-463-3,France)
Sodium Chloride		RG78

- 15.2. Chemical safety assessment

Not applicable

Section 16: OTHER INFORMATION:

The information contained herein is based on our current knowledge of the underlying data and is intended to describe the product for the purpose of health, safety and environmental requirements only. No warranty or guarantee is expressed or implied regarding the accuracy of these data or the results to be obtained from the use of this product.