

Material Safety Data Sheet Nisin

Section 1: Chemical Product and Company Identification

Product Name : Nisin
Chemical Formula : $C_{143}H_{230}N_{42}O_{37}S_7$
Company Identification : Tradeasia International Pte Ltd
Email : contact@chemtradeasia.com

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS#	% by Weight
Nisin	1414-45-5	99

Toxicological Data on Ingredients: Nisin LD50: Not available. LC50: Not available.

Section 3: Hazards Identification

Hazardous overview: Nisin is slightly hazardous in case of inhalation, skin contact, ingestion or eye contact.

Contact with eyes: May cause eye irritation.

Contact with skin: May cause skin irritation.

Ingestion: May cause irritation of the digestive tract.

Inhalation: May cause respiratory tract irritation.

Other: Not Applicable.

Section 4: First Aid Measures

Contact with eyes: Flush immediately with plenty of water for 20 minutes and seek medical advice.

Contact with skin: Wash the affected area with water, remove contaminated clothing and launder before re-use.
Seek medical advice if irritation develops or persists.

Ingestion: No specific treatment is necessary.

Inhalation: Remove from exposure, move to fresh air and seek medical advice immediately.

Section 5: Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: Not applicable.

Flash Points: Not applicable.

Ignition Control: Avoid ignition sources where Nisin dust might be generated.

Dust Control: Keep the handling area with adequate ventilation

Extinguishing Media: Not applicable

Section 6: Accidental Release Measures

Spills / Leaks: Vacuum or sweep up material and place into a suitable disposal container.

Section 7: Handling and Storage

Precautions:

Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust.

Storage: Stored with original packing under 20°C in cool and dry condition, away from direct sunlight.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:

Safety shower and eye bath. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations below their respective threshold limit value.

Respiratory Protection: NIOSH/MSHA or European Standard EN 154 approved respirator.

Eye Protection: Protective eyeglasses or chemical safety goggles.

Skin Protection: Wear appropriate protective gloves and clothes to minimize skin contact.

Other: Consult professionals if Nisin needs to be handled under some special conditions.

Section 9: Physical and Chemical Properties

Physical state and appearance	: Solid.
Odor	: Odorless.
Taste	: Not available.
Molecular Weight	: 3354.07 g/mole
Color	: Light brown to cream white.
pH	: 3.1 – 3.6
Boiling Point	: Not available.
Melting Point	: Not available.
Critical Temperature	: Not available.
Specific Gravity	: Not available.
Bulk Density	: 1.402 g/mL.
Vapor Pressure	: Not available.
Vapor Density	: Not available.
Volatility	: Not available.
Odor Threshold	: Not available.
Water/Oil Dist. Coeff.	: Not available.
Ionicity (in Water)	: Not available.
Dispersion Properties	: See solubility in water.
Solubility	: in water (pH = 7), the solubility is 49.0mg/ml ; in 0.02M Hydrochloric acid, the solubility is 118.0mg/ml

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Shelf Life: 24 months period.

Instability Temperature: Not available.

Conditions of Instability: Not available.

Incompatibility with various substances: Not available.

Special Remarks on Reactivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Section 12: Ecological Information

Nisin is fully biodegradable and the products of degradation are not toxic.

Section 13: Disposal Considerations

Waste Disposal:

Section 14: Transport Information

No special requirements and no restrictions on transportation by land, sea or air.

Section 15: Other Regulatory Information

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