

NISIN SAFETY DATA SHEET

SECTION 1: Hazards identification

1.1 Classification of the substance or mixture

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

This substance is not classified as dangerous according to Directive 67/548/EEC.

1.2 Label elements

This substance is not classified as dangerous according to Directive 67/548/EEC.

1.3 Other hazards - none

SECTION 2: Composition/information on ingredients

2.1 Substances

Formula: $C_{143}H_{230}N_{42}O_{37}S_7$

Molecular weight: 3.354 g/mol

CAS-No.: 1414-45-5

EC-No.: 215-807-5

No components need to be disclosed according to the applicable regulations.

SECTION 3: First aid measures

3.1 Description of first aid measures

- If inhaled: If breathed in, move person into fresh air. If not breathing, give artificial respiration.
- In case of skin contact: Wash off with soap and plenty of water.
- In case of eye contact: Flush eyes with water as a precaution.
- If swallowed: Never give anything by mouth to an unconscious person. Rinse mouth with water.

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

The most important known symptoms and effects are described in the labeling (see section 1.2) and/or in section 10.

3.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 4: Firefighting measures

4.1 Extinguishing media

Suitable extinguishing media

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

4.2 Special hazards arising from the substance or mixture

Carbon oxides, Nitrogen oxides (NO_x), Sulphur oxides.

4.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

4.4 Further information

No data available

SECTION 5: Accidental release measures

5.1 Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing vapours, mist or gas.

For personal protection see section 7.

5.2 Environmental precautions

Do not let product enter drains.

5.3 Methods and materials for containment and cleaning up

Sweep up and shovel. Keep in suitable, closed containers for disposal.

5.4 Reference to other sections

For disposal see section 12.

SECTION 6: Handling and storage

6.1 Precautions for safe handling

Provide appropriate exhaust ventilation at places where dust is formed.

For precautions see section 1.2.

6.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

SECTION 7: Exposure controls/personal protection

7.1 Control parameters

Components with workplace control parameters

7.2 Exposure controls

Appropriate engineering controls

General industrial hygiene practice.

Personal protective equipment

Eye/face protection: Use equipment for eye protection tested and approved under appropriate government standards, such as NIOSH (US) or EN 166(EU).

Skin protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Body Protection: Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection: Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure: Do not let product enter drains.

SECTION 8: Physical and chemical properties

8.1 Information on basic physical and chemical properties

a) Appearance

Form: powder

Colour: off-white

b) Odour: No data available

c) Odour Threshold: No data available

d) PH: No data available

e) Melting point/freezing point: No data available

f) Initial boiling point and boiling range: No data available

- g) Flash point: No data available
- h) Evaporation rate: No data available
- i) Flammability (solid, gas): No data available
- j) Upper/lower flammability or explosive limits: No data available
- k) Vapour pressure: No data available
- l) Vapour density: No data available
- m) Relative density: No data available
- n) Water solubility: No data available
- o) Partition coefficient: n-octanol/water No data available
- p) Auto-ignition temperature: No data available
- q) Decomposition temperature: No data available
- r) Viscosity: No data available
- s) Explosive properties: No data available
- t) Oxidizing properties: No data available

8.2 Other safety information

No data available

SECTION 9: Stability and reactivity

9.1 Reactivity

No data available

9.2 Chemical stability

Stable under recommended storage conditions.

9.3 Possibility of hazardous reactions

No data available

9.4 Conditions to avoid

No data available

9.5 Incompatible materials

Strong oxidizing agents

9.6 Hazardous decomposition products

Other decomposition products - No data available

In the event of fire: see section 4

SECTION 10: Toxicological information

10.1 Information on toxicological effects

Acute toxicity: LD50 Intravenous-Mouse-100mg/kg

Skin corrosion/irritation: No data available

Serious eye damage/eye irritation: No data available

Respiratory or skin sensitization: No data available

Germ cell mutagenicity: No data available

Carcinogenicity: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity: No data available

Specific target organ toxicity - single exposure: No data available

Specific target organ toxicity - repeated exposure: No data available

Aspiration hazard: No data available

Additional Information: RTECS: QU3340000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 11: Ecological information

11.1 Toxicity

No data available

11.2 Persistence and degradability

No data available

11.3 Bioaccumulative potential

No data available

11.4 Mobility in soil

No data available

11.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

11.6 Other adverse effects

No data available

SECTION 12: Disposal considerations

12.1 Waste treatment methods

Product: Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging: Dispose of as unused product.

SECTION 13: Transport information

13.1 UN number

ADR/RID: - ; IMDG: - ; IATA: -

13.2 UN proper shipping name

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

13.3 Transport hazard class(es)

ADR/RID: - ; IMDG: - ; IATA: -

13.4 Packaging group

ADR/RID: - ; IMDG: - ; IATA: -

13.5 Environmental hazards

ADR/RID: no; IMDG Marine pollutant: no; IATA: no.

13.6 Special precautions for user: No data available

SECTION 14: Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

14.1 Safety, health and environmental regulations/legislation specific for the substance or mixture: No data available

14.2 Chemical Safety Assessment: For this product a chemical safety assessment was not carried out.

SECTION 15: Other information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.