



Safety Data Sheet

Version 14

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

1.1 Product identifiers

Product name: Phageguard Listex (PGL)
Product number: 108 (1000 mL), 109 (100 mL)
CAS-No.: N.A.

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

Liquid anti-Listeria phage culture which kills *Listeria monocytogenes* on food and on food contact surfaces.

1.3 Details of the supplier of the safety data sheet

Manufacturer: Microeos Food Safety B.V.
Nieuwe Kanaal 7P
6709 PA, The Netherlands
Tel: +31 88 8007 151

1.4 Emergency telephone number

Emergency Phone +31-6-15356068

Section 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

US: The product contains no substances which at their given concentration is considered to be hazardous to health.

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

2.2. Label elements

The product does not need to be labelled in accordance with EC directives or respective other national laws.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bio accumulative and toxic (PBT), or very persistent and very bio accumulative (vPvB) at levels of 0.1% or higher.

Section 3. COMPOSITION/INFORMATION OF INGREDIENTS

This mixture contains no substances which at their given concentration are considered to be hazardous to health

Physical State and Appearance: Clear to slightly opaque, yellow liquid. Phageguard products are made using a natural production process. This may result in some turbidity in the product which can vary between batches, and appear over time.

Section 4. FIRST-AID MEASURES

General advice: Show this safety data sheet to the doctor in attendance.

Inhalation: Move to fresh air.

Skin contact: Wash off with water.

Eye contact: Rinse thoroughly with plenty of water, also under the eyelids.

Ingestion: Drink water.

Major effects of exposure: May cause eye irritation with susceptible persons

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Section 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media Water, carbon dioxide (CO₂), foam.

Extinguishing media which must not be used for safety reasons None.

Specific hazards Burning produces irritant fumes.

Special protective equipment for firefighters None.

Specific methods Standard procedure for chemical fires.

Section 6. ACCIDENTAL RELEASE MEASURES

Personal precautions Avoid contact with eyes.

Environmental precautions No special environmental precautions required.

Methods for cleaning up Flush with water.

Section 7. HANDLING AND STORAGE

Handling: No special precautions required.

Storage: Keep refrigerated at 36-46°F (2-8°C). Do not freeze. Avoid temperatures above 99°F (37°C).

Section 8. EXPOSURE CONTROLS/PERSONEL PROTECTION

Engineering measures to reduce exposure Insure adequate ventilation, especially in confined areas.

Control parameters None.

Personal protection equipment No special protective equipment required.

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

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State and Appearance: Clear to slightly opaque, yellow liquid. Phageguard products are made using a natural production process. This may result in some turbidity in the product which can vary between batches, and appear over time.

Molecular Weight: Not applicable.

Molecular Formula: Not applicable.

pH: 6.0 – 8.0

Boiling/Condensation Point: Not applicable

Melting/Freezing Point: Not applicable

Vapor pressure: Not available

Density: Not available

Solubility: Soluble in water

Viscosity: Not available

Flash Point: Not applicable

Flammability Limits: Not self-igniting

Section 10. STABILITY AND REACTIVITY

Stability Shelf life 12 months when refrigerated at 36-46°F (2-8°C).

Conditions to avoid Temperatures outside 36-46°F (2-8°C). Do not freeze. Temperatures above 99°F (37°C).

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Materials to avoid None.

Hazardous decomposition products Carbon oxides.

Section 11. TOXICOLOGICAL INFORMATION

Bioinformatical analysis of the phage genomes showed an absence of genes encoding known virulence factors and toxins.

Chronic Effects on Humans: Health injuries are not known or expected under normal use.

Acute Effects on Humans: None

Irritancy: May cause eye irritation with susceptible persons.

Sensitization: Non-sensitizing

Carcinogenic Effects: The product is not known to cause cancer in animals or humans.

Toxicity to Reproductive System: Not available.

Teratogenic Effects: Not available.

Mutagenic Effects: Not available.

Repeated high dose toxicology study in rats: normal histomorphometric limits.

Section 12. ECOLOGICAL INFORMATION

Phageguard is believed not to be dangerous to the environment with respect to mobility, persistence and degradability, bio accumulative potential, aquatic toxicity and other data pertaining to ecotoxicity.

Section 13. DISPOSAL CONSIDERATIONS

EPA Waste Number: Not available

Treatment: The product does not have an EPA Waste Code and is no listed waste. Always contact a permitted waste disposal site (TSD) to assure compliance with all current local, state, and Federal Regulations.

EC There are no uniform EC regulations for the disposal. Small quantities of waste are disposed of as domestic refuse. Large quantities are disposed of in accordance with the local regulations.

Section 14. TRANSPORT INFORMATION

DOT Classification: Not applicable

IMO/IMDG Classification: Not applicable

ICAO/IATA Classification: Not applicable

Storage: Keep refrigerated at 36-46°F (2-8°C). Do not freeze. Avoid temperatures above 99°F (37°C).

Section 15. REGULATORY INFORMATION

U.S. Federal Regulations: FDA & USDA approved Phageguard Listex as a "GRAS" GRN. 000218 (Generally Recognized as Safe) food processing aid against *Listeria*

EC When in use as a processing aid, Phageguard Listex is exempted under EU law and free from labelling under Directive 2000/13/EC.

Section 16. OTHER INFORMATION

This data sheet complies with EU Directive 91/155 as amended. Product specifications are available on request. This information relates to the specified material designated and may not be valid for such material used in combination with any other materials or in any other process. Such information is, to the best of our knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made as to its accuracy, reliability and completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use. Health and safety information is directed towards the safe use rather than the commercial performance of the product.