

material safety data sheet

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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade name: GREENSTIM®
Glycinebetaine for plant applications

Manufacturer: Finnfeeds Finland Oy*, Naantali Plant,
Satamatie 2, FIN-21100 Naantali, Finland
Tel. +358 2 4393 300, Fax +358 2 4393 333

Marketed by: Verdera Oy
Riihitontuntie 14 A, P.O. Box 1, FIN-02201 Espoo, Finland
Tel. +358 10 217 3700, Fax +358 10 217 3711

Emergency telephone: Manufacturer in Finland: +358 2 4393 300

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Trading as Danisco Animal Nutrition

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients:	CAS-No.	EINECS-No.	Classification
Glycinebetaine	107-43-7	203-490-6	Not classified

Chemical composition: Glycinebetaine, min. 97%. Contains no hazardous components.

Synonyms: Betaine, 1-Carboxy-N,N,N-trimethylmethanaminium hydroxide inner salt, Trimethylglycine

3. HAZARDS IDENTIFICATION

Continuous breathing of dust, like any dust, may cause allergic type reactions in sensitive persons. Due to the hygroscopic nature of the dry product, avoid prolonged contacts with skin, eyes and mucous membranes.

4. FIRST-AID MEASURES

Inhalation: Remove from exposure.

Skin contact: Rinse with water.

Eye contact: Rinse with water.

Ingestion: Rinse mouth and throat with water.

5. FIRE-FIGHTING MEASURES

Suitable fire extinguishing media: Water, CO₂, foam, powder extinguisher, sand

Non-suitable media: Not known

Exposure hazards: If overheated, the risk for formation of decomposition products (trimethylamine, ketene). Formation of nitrous vapours in combustion.

Protective equipment for firefighters: Respiratory protector with gas filter or breathing apparatus recommended.

6. ACCIDENTAL RELEASE MEASURES

Take up preferably by mechanical means. Wash with lots of water.

7. HANDLING AND STORAGE

Avoid formation of dust during handling. Store in a dry and cool place in an unopened package.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Recommended personal protection:

Respiratory protection: Respiratory protector approved for this type of dust

Hand protection: Impermeable gloves

Eye protection: Protecting glasses or eye shield

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Free-flowing, light brown crystals

Odour: Faint characteristic odour

pH value: 6 - 10 (5% solution)

Solubility: 160 g/100 g (in water, 25°C)

10. STABILITY AND REACTIVITY

This product is stable under normal conditions of use.

Conditions to avoid: Due to the hygroscopic nature of the product, avoid humid conditions.

Materials to avoid: Risk for formation of trimethylamine in hot, strongly alkaline solution.

Hazardous decomposition: Possible decomposition products if overheated: trimethylamine and ketene.

11. TOXICOLOGICAL INFORMATION

Continuous breathing of dust, like any dust, may cause allergic type reactions in sensitive persons. Betaine anhydrous, oral rat LD₅₀ = 11.179±0.725 g/kg B.W., therefore the product is not classified as toxic for acute health hazards.

12. ECOLOGICAL INFORMATION

The product is believed not to be dangerous to the environment with respect to mobility, persistency and degradability, bioaccumulative potential, aquatic toxicity and other data relating to ecotoxicity.

13. DISPOSAL CONSIDERATIONS

No special disposal method required except that it be in accordance with current local authority regulations.

14. TRANSPORT INFORMATION

UN No.	Not applicable
Sea	Not applicable
Road/rail	Not applicable
Air	Not applicable

15. REGULATORY INFORMATION

The product is not subject to mandatory labeling.

16. OTHER INFORMATION

This data sheet complies with EU Directive 91/155 as amended.
A Product Description is available on request.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made as to its accuracy, reliability or 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.