

SAFETY DATA SHEET



First you add knowledge...

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

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product Name Betafin® S1
Material Number M51E0
Synonyms 1-Carboxy-N,N,N-trimethylmethan-aminium hydroxide inner salt. Trimethylglycine.

Recommended use Animal feed

Company/undertaking identification: Danisco Animal Nutrition

PO Box 777
Marlborough
Wiltshire SN81XN
United Kingdom
Tel: +441672 517777

Manufacturer Finnfeeds Finland Ltd.
Naantali Plant
Satamatie 2
FI-21100 Naantali
Finland

E-mail address SDS.Genencor@Danisco.com
Emergency telephone: +358 10 431 020 (Monday - Friday 8-17 (+2 GMT))

2. HAZARDS IDENTIFICATION

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

Primary Routes of Exposure Inhalation
Skin contact
Eye contact

Properties affecting health 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.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Description Betaine anhydrous with anti-caking agent preparation.

Chemical Name	%	CAS-No	EINECS-No	REACH No	Hazardous classification	IUB Code	Notes
Betaine Anhydrous	min 96 d.s.	107-43-7	203-490-6	-	NE	-	
Calcium stearate	min 1	1592-23-0	216-472-8	-	NE	-	

Note:
d.s. = Dry Solid. NE = Not established

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4. FIRST AID MEASURES

Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists, consult a specialist.
Skin contact	Wash off immediately with plenty of water. If skin irritation persists, call a physician.
Ingestion	Clean mouth with water and afterwards drink plenty of water.
Inhalation	Move to fresh air.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide
Extinguishing media which must not be used for safety reasons	None in particular.
Specific hazards during fire fighting	If overheated, the risk for formation of decomposition products (trimethylamine, ketene). Formation of nitrous vapours in combustion.
Special protective equipment for fire-fighters	Wear self-contained breathing apparatus and protective suit.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Avoid contact with the skin and the eyes. Avoid dust formation.
Environmental precautions	No special environmental precautions required
Methods for cleaning up	Do not dry sweep dust. Wet dust with water before sweeping or use a vacuum to collect dust. After cleaning, flush away traces with water.

7. HANDLING AND STORAGE

Handling	Avoid dust formation. Avoid inhalation, ingestion and contact with skin and eyes
Technical measures/Precautions	Provide appropriate exhaust ventilation at places where dust is formed.
Storage	Keep container tightly closed and dry.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limits

Chemical Name	Denmark	Finland	Norway	Sweden	The Netherlands
Calcium stearate				LLV: 5 mg/m ³	
Other dusts of organic origin	TWA: 3 mg/m ³	TWA: 5 mg/m ³ STEL: 10 mg/m ³			

Chemical Name	Russia	Estonia	Latvia	Lithuania	Poland
Calcium stearate				IPRV 3 mg/m ³	
Other dusts of organic origin		TWA 5 mg/m ³			

Occupational exposure controls

- Engineering measures** Ensure adequate ventilation. Local exhaust ventilation of dust at the point of generation.
- Hygiene measures** Avoid contact with skin, eyes and clothing. Handle in accordance with good industrial hygiene and safety practice.

Personal protective equipment

- Respiratory protection** In case of insufficient ventilation: Effective dust mask.
- Eye protection** Safety glasses with side-shields.
- Skin and body protection** Wear suitable protective clothing, gloves and eye/face protection
- Hand protection** Protective gloves.

Environmental exposure controls Not regulated

9. PHYSICAL AND CHEMICAL PROPERTIES

General Information

Physical state Crystalline solid.
Appearance Light brown
Odour Characteristic

Other information:

pH	7-10 (5% solution)	Flash point	Non-combustible.
Boiling Point/Range	Not applicable.	Autoignition temperature	No information available
Vapour pressure	Not applicable	Viscosity	Not applicable
Water solubility	160 g / 100g (in water, 25°C)	Evaporation rate	Not applicable
Dust explosion concentration (g/m³), low	60	Kst Value (bar.m/s):	234
Maximum rate of pressure rise (bar/s)	864	Explosion Severity (bar):	8.9
Flammability Limits in Air	No information available	Explosion limits	No information available

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10. STABILITY AND REACTIVITY

Stability	Stable under normal conditions.
Conditions to avoid	Very hygroscopic; protect from moisture.
Materials to avoid	Strong bases.
Hazardous decomposition products	Risk for formation of trimethylamine in hot, strongly alkaline solution.

11. TOXICOLOGICAL INFORMATION**Product Information**

Product does not present an acute toxicity hazard based on known information.

Ingestion	Generally regarded as safe by ingestion.
Inhalation	Inhalation of dust in high concentration may cause irritation of respiratory system.
Skin contact	Prolonged or repeated contact may dry skin and cause irritation.
Eye contact	Dust contact with the eyes can lead to mechanical irritation.
Sensitization	Continuous breathing of dust, like any dust, may cause allergic type reactions in sensitive persons.

Betaine Anhydrous

Oral	LD50/oral/rat 11179 mg/kg
Eye irritation	Not an irritant.
Sensitisation	Not a sensitizer in guinea pig sensitization studies.
Mutagenic effects	Negative in Ames assay with and without metabolic activation up to 5000 ug/plate. Negative in chromosomal aberration using human lymphocytes. No increases in micronuclei were noted in the bone marrow of mice dosed up to 2 gm/kg by the oral route.

Calcium stearate

Oral	LD50/oral/rat 10,000 mg/kg
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12. ECOLOGICAL INFORMATION

Ecotoxicity effects Contains no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants.

Mobility The product is water soluble, and may spread in water systems.

Persistence and degradability Readily biodegradable, according to appropriate OECD test. Biological degradability (28d): 88% (Betaine)

Bioaccumulative potential Bioaccumulation is unlikely.

Component Information Component information below is as complete as possible. Any fields not shown indicate no data is presently available.
The ecotox data is based on 50% betaine solution.

Chemical Name	log Pow	Chemical Oxygen Demand (COD)	Biochemical Oxygen Demand (BOD)	Bioconcentration factor (BCF)	Dissolved organic carbon (DOC)
Betaine Anhydrous		14 mg/g (Cr)	BOD5 ATU: 720 mg/g		300 mg/g

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products Dispose of contents/container in accordance with local regulation

14. TRANSPORT INFORMATION

Dangerous goods Not dangerous goods in the meaning of ADR/RID, ADNR, IMDG-Code, ICAO/IATA-DGR.

15. REGULATORY INFORMATION

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

Germany
Water Endangering Classes (WGK): WGK: 1

16. OTHER INFORMATION

Full text of R-phrases referred to under sections 2 and 3**Issuing date** 03/12/2009**Revision Date** 26/01/2010**This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006****Disclaimer**

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text

End of Safety Data Sheet