

SAFETY DATA SHEET

Farmers Choice

Safety data sheet according to (EC) No 1907/2006.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier:

BioSan Farmers Choice (Ready To Use)

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

Advised against: Disinfectant against all known viruses, bacteria, fungi and fungal spores and living condition for vermin. **Avoided:** No comments.

1.3. Details of the supplier of the safety data sheet:

BioSan

Ejby Mosevej 5

Tel.: +45 7875 6410

DK-2600 Glostrup, Denmark

E-mail: lov@biosan-nordic.com

Responsible for safety data sheet

(e-mail): lov@biosan-nordic.com

1.4. Emergency telephone number: +45 82 12 12 12

(Poison Hotline - open 24 hours all days)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture:

Alttox a/s has assessed that the preparation need not be classified according to EU (67/548 or 1999/45) and CLP (1272/2008).

2.2. Label elements:

None.

2.3. Other hazards: None known.

PBT/vPvB: The ingredients are not considered PBT/vPvB according to the criteria in REACH annex XIII.

SECTION 3: Composition/information on ingredients

3.2. Substances:

% w/w	Substance name	CAS	EC No.	Index no.	REACH reg. no.	Substance classification
≤ 0,9	N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine	2372-82-9	219-145-8	-	-	EU: Xn;R22-48/22 C;R35 N;R50 (M= 10) CLP: Acute Tox. 3;H301 Skin Corr.1A;H314 STOT RE 2;H373 Aquatic Acute 1;H400 (M= 1)
≤ 0,45	Didecylidimethyl-ammonium chloride	7173-51-5	230-525-2	612-131-00-6	-	EU: Xn;R22 C;R34 N;R50 (M= 10) CLP: Acute Tox. 3;H301 Skin Corr.1B;H314 Aquatic Acute 1;H400 (M= 10)
≤ 0,45	2-Aminoethanol *	141-43-5	205-483-3	603-030-00-8	-	EU: Xn;R20/21/22 C;R34 CLP: Acute Tox. 4;H302+H312+H332 Skin Corr.1B;H314
≤ 0,25	Fatty alcohol C ₁₆₋₁₈ , 1-2,5 EO	68439-49-6	500-212-8	-	-	EU: Xn;R22 Xi;R41 CLP: Acute Tox. 4;H302 Eye Dam. 1;H318
≤ 0,25	Potassium carbonate	584-08-7	209-529-3	-	-	EU: Xi;R36/37/38 CLP: Eye Irrit. 2;H319 Skin Irrit. 2;H315 STOT SE 3;H335

* The substance is an organic solvent

See Section 16 for the full text of R phrases and hazard statements.

SECTION 4: First aid measures

4.1. Description of first aid measures:

Inhalation: Move the person to fresh air. Keep at rest under observation. In case of discomfort: Seek medical advice.

Skin: Remove contaminated clothing. Flush the skin and wash thoroughly with soap and water. If irritation persists: Seek medical advice.

Eyes: Flush thoroughly with water or physiological salt water. Remove contact lenses, if relevant, and open the eye wide. If irritation persists: Seek medical advice.

Ingestion: Wash out mouth and drink plenty of water. In case of discomfort: Seek medical advice.

4.2. Most important symptoms and effects, both acute and delayed:

Possible mild irritation of lungs, skin and eyes.

4.3. Indication of any immediate medical attention and special treatment needed:

Show this safety data sheet to the physician or emergency ward.

SECTION 5: Firefighting measures

5.1. Extinguishing media:

Does not burn. Water mist (never water jet - spreads the fire), foam, power or carbon dioxide against surrounding fire.

5.2. Special hazards arising from the substance or mixture:

Not applicable.

5.3. Advice for firefighters:

Use pressurised air mask in case of heavy smoke.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures:

Use personal protective equipment - see Section 8.

6.2. Environmental precautions:

Do not discharge to drains - see Section 12. Inform local environmental authorities in case of release to the environment.

6.3. Methods and material for containment and cleaning up

Collect and handle as chemical waste. Flush thoroughly with water. Further handling of spills - see Section 13.

6.4. Reference to other sections:

See above.

SECTION 7: Handling and storage

7.1. Precautions for safe handling:

Avoid contact with skin, eyes and clothes. Change any contaminated clothing. Wash with plenty of soap and water after use.

7.2. Conditions for safe storage, including any incompatibilities:

Store in well-closed original container at a temperature of 10 - 40°C.

7.3. Specific end use(s):

See use - Section 1.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters:

AT: occupational exposure limit: 1 ppm = 2.5 mg/m³ EH (Ethanolamine ~ 2-Aminoethanol)

E: An EC exposure limit applies to the substance. H: The substance can be absorbed through the skin.

DNEL/PNEC:

No CSR.

8.2. Exposure controls:

Appropriate exposure control measures: No special requirements.

Personal protective equipment:

Inhalation: Usually not necessary.

Skin: Wear protective gloves, e.g. made of nitrile (according to EN374). Breakthrough time (0.4 mm glove thickness): > 480 min.

Eyes: Usually not necessary. Close-fitting safety goggles (according to EN166) if at risk of drops/splashes.

Environmental exposure controls: See Sections 6 and 13.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties:

Appearance:	Weak yellowish liquid
Odour:	Amine
pH (20°C):	11.4 (10% solution) ; 11.0 (1% solution)
Melting point/freezing point (°C):	~ 0
Initial boiling point and boiling range (°C):	~ 100
Flash point (°C):	> 60
Upper/lower flammability or explosive limits (vol-%):	Not applicable
Vapour pressure (hPa, 20°C):	Not determined
Relative density (g/cm ³ , 20°C):	1.01
Solubility:	Miscible with water
Partition coefficient: n-octanol/water, Log K _{ow} :	Not determined
Viscosity (Dynamic, mPa•s, 23°C):	Not determined
Explosive/oxidising properties:	Non-explosive/non-oxidising
9.2. Other information:	None relevant

SECTION 10: Stability and reactivity

10.1. Reactivity:

No available data.

10.2. Chemical stability:

Stable under the recommended storage conditions - see Section 7.

10.3. Possibility of hazardous reactions:

None known.

10.4. Conditions to avoid:

Avoid heating and frost.

10.5. Incompatible materials:

Strong oxidising agents.

10.6. Hazardous decomposition products:

Highly toxic fumes are emitted when heated to very high temperatures (decomposition): Mainly carbon oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects:

Hazard class	Data	Test	Data source
Acute toxicity: Inhalation Dermal Oral	No available/useful data LD ₅₀ (rabbit) > 600 mg/kg (CAS: 2372-82-9) LD ₅₀ (rat) > 261 mg/kg (CAS: 2372-82-9) LD ₅₀ (rat) > 84 mg/kg (CAS: 7173-51-5) LD ₅₀ (female/male rat) = 1720 / 1970 mg/kg (2-Aminoethanol) LD ₅₀ (rat) = 300-2000 mg/kg (CAS: 68439-49-6)	- OECD 402 OECD 401 Not indicated Not indicated Read-across	- EU Biocide EU Biocide RTECS IUCLID CESIO
Corrosion/irritation:	Strongly corrosive (< 3 min), rabbit (CAS: 2372-82-9) Serious skin irritation/skin burns, rabbit (CAS: 7173-51-5) Irritation to burns of skin and eyes, rabbit (2-Aminoethanol) Serious eye irritation, rabbit (CAS: 68439-49-6) Irritating to skin/eyes (Potassium carbonate)	OECD 404 Draize BASF test Read-across OECD 404/405	EU Biocide RTECS IUCLID CESIO IUCLID
Sensitisation:	Skin sensitisation, guinea pigs (CAS: 2372-82-9) Skin sensitisation, guinea pigs (2-Aminoethanol)	OECD 406 Called drop-on	EU Biocide IUCLID
CMR:	No genotoxic effect <i>in vitro</i> (CAS: 2372-82-9) No reproductive toxicity/teratogenic effect (CAS: 2372-82-9) NOAEL, oral, rat, 90 d (CAS: 2372-82-9) TD _{Lo} (oral, rat) = 5250 mg/kg: "Paternal / Maternal Effect" and "Effects on Newborn" (CAS: 7173-51-5) Non-mutagenic in <i>in vitro</i> and <i>in vivo</i> tests (2-Aminoethanol) TD _{Lo} (female rat) = 500 mg/kg, 5-16 days after mating "Effects on foetus" (2-Aminoethanol)	OECD 471/476 Multiple data Not indicated Multigenerational Not indicated Not indicated	EU Biocide ECHA EU Biocide RTECS IUCLID IUCLID

Likely routes of exposure: Lungs, skin and gastrointestinal tract.

Symptoms:

Inhalation: May cause irritation to nose, throat, lungs and respiratory system.

Skin: May cause irritation with reddening and pain.

Eyes: May cause irritation with reddening and pain.

Ingestion: May cause gastrointestinal tract irritation. Ingestion of larger quantities may cause headache, nausea and diarrhoea.

Chronic effects: Prolonged or repeated skin contact may cause dry skin and cracked skin.

Inhalation of high concentrations or frequent inhalation of even very small quantities of organic solvents may cause damage to organs such as the liver, kidneys and central nervous system (including brain damage).

SECTION 12: Ecological information

12.1. Toxicity:

Aquatic	Data	Test (Medium)	Data source
Fish	LC ₅₀ (Oncorhynchus mykiss, 96 h) = 0.68 mg/l (CAS: 2372-82-9) LC ₅₀ (Fish, 96 h) = 1-10 mg/l (CAS: 68439-49-6)	OECD 203 Read-across	Supplier CESIO
Crustaceans	EC ₅₀ (Daphnia magna, 48 h) = 0.073 mg/l (CAS: 2372-82-9) NOEC (Daphnia magna, 21 d) = 0.024 mg/l (CAS: 2372-82-9) EC ₅₀ (Daphnia magna - 48 h) = 0.094 mg/l (CAS: 7173-51-5)	US-EPA OECD 211 84/449/EEC (FW)	Supplier Supplier EPA Ecotox
Algae	EC ₅₀ (Green algae, 96 h) = 0.054 mg/l (CAS: 2372-82-9) ErC ₁₀ (Green algae, 72 h) = 0.012 mg/l (CAS: 2372-82-9)	Not stated (FW) Not stated (FW)	Supplier Supplier

12.2. Persistence and degradability:

The surfactants comply with the EU regulation on ultimate aerobic biodegradability for detergents.

CAS: 2372-82-9 & 7173-51-5 are rapidly degradable (>60%, BOD, 28 d. OECD 301D).

12.3. Bioaccumulative potential:

CAS: 2372-82-9: Log K_{ow} < 3 - To the extent that the substance is not degraded before being absorbed in aquatic organisms, there is a possibility of moderate bioaccumulation.

CAS: 7173-51-5: Log K_{ow} > 3 - possibility of significant bioaccumulation.

12.4. Mobility in soil:

CAS: 2372-82-9 & 7173-51-5 : Log K_{oc} ≤ 1 - high mobility in the soil environment can be expected

12.5. Results of PBT and vPvB assessment:

The ingredients are not considered PBT/vPvB according to the criteria in REACH annex XIII.

12.6. Other adverse effects:

None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods:

Dispose of major spills or large residues to local authority collection facility, the environmental collection truck or Nord (previously Kommunekemi).

Chemical waste group:	EWC code:
H	20 01 30 (Residue)
H	15 02 03 (Absorbents contaminated with the product)

SECTION 14: Transport information

Not comprised by the transport rules for dangerous goods (ADR/RID, IMDG, IATA).

14.1. UN number: Not applicable

14.2. UN proper shipping name: Not applicable

14.3. Transport hazard class(es): Not applicable

14.4. Packing group: Not applicable

14.5. Environmental hazards: None.

14.6. Special precautions for user: None.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable.

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture:**Other labelling:

< 5% Nonionic surfactants, Cationic surfactants

Didecyldimethylammonium chloride, N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine

15.2. Chemical safety assessment:

No CSR.

SECTION 16: Other information**Full text of R phrases and hazard statements in Sections 2 and 3:**

R 20/21/22:	Harmful by inhalation, in contact with skin and if swallowed.
R 22:	Harmful if swallowed.
R 34:	Causes burns.
R 35:	Causes severe burns.
R 36/37/38:	Irritating to eyes, respiratory system and skin.
R 41:	Risk of serious damage to eyes.
R 48/22:	Harmful: danger of serious damage to health by prolonged exposure if swallowed.
R 50:	Very toxic to aquatic organisms.
H301:	Toxic if swallowed.
H302:	Harmful if swallowed.
H302+H312+H332:	Harmful if swallowed, in contact with skin or if inhaled.
H314:	Causes severe skin burns and eye damage.
H315:	Causes skin irritation.
H318:	Causes serious eye damage.
H319:	Causes serious eye irritation.
H335:	May cause respiratory irritation.
H373:	May cause damage to organs through prolonged or repeated exposure.
H400:	Very toxic to aquatic life.

Abbreviations:

CMR = Carcinogenic, mutagenic and toxic to reproduction.

CSR = Chemical Safety Report

DNEL = Derived No-Effect Level

EC₅₀ = Effect Concentration 50 %

ECHA = European Chemicals Agency

LC₅₀ = Lethal Concentration 50 %

PBT = Persistent, Bioaccumulative, Toxic

PNEC = Predicted No-Effect Concentration

vPvB = very Persistent, very Bioaccumulative

Advice on training/instruction:

The mixture should only be used by persons well instructed in the proper work procedure and familiar with the contents of this safety data sheet.

Changes since previous version:

Not applicable.

At. = Danish Working Environment Authority
ECB = European Chemicals Bureau.
FW = Fresh Water
GPMT = Guinea Pig Maximization Test
LD _{Lo} = Lowest Lethal Dose
LD ₅₀ = Lethal Dose 50 %