

Urea, feed grade

Version 3

Revision Date 26.11.2015

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

Product information

Trade name : Biuron, UREA SR

Synonyms : Urea

Registration number : 01-2119463277-33-0000

Use of the Substance/Mixture : Nutritional physiology additive for feeding of ruminant animals

Supplier :
: Borealis L.A.T GmbH
St.-Peter-Strasse 25, 4021 Linz, Austria
Telephone: +43 732 6915-0

E-mail address : product.safety@borealisgroup.com

Emergency telephone number : +44 (0) 1235 239 670 (24h)

2. HAZARDS IDENTIFICATION

GHS Classification (1272/2008 (EC))

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

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature : Substance

Components

Chemical Name	CAS-No. EC-No. Registration number	Concentration [%]
urea	57-13-6 200-315-5 01-2119463277-33	>= 98

4. FIRST AID MEASURES

General advice : No specific instructions needed.

Biuron is a registered trademark of the Borealis group.

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- Inhalation : Move to fresh air.
If symptoms persist, call a physician.
- Skin contact : Wash off with soap and plenty of water.
Take off contaminated clothing and wash before reuse.
If skin irritation persists, call a physician.
- Eye contact : Rinse cautiously with water for several minutes.
- Ingestion : Rinse mouth with water.
Do NOT induce vomiting.
If conscious, drink plenty of water.

Notes to physician

- Symptoms : Inhalation:
Cough
Shortness of breath
Sore throat
- Skin contact:
Redness
- Eye contact:
Redness
- Ingestion:
Convulsions
Headache
Nausea
Vomiting
- Treatment : Treat symptomatically.

5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Carbon dioxide (CO₂)
Water mist
Alcohol-resistant foam
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during firefighting : The product itself does not burn.
Burning produces irritant fumes.
- Special protective equipment for firefighters : Wear self-contained breathing apparatus and protective suit.
- Further information : Standard procedure for chemical fires.

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6. ACCIDENTAL RELEASE MEASURES

- Personal precautions : Use personal protective equipment.
Material can create slippery conditions.
Use non-slip safety shoes in areas where spills or leaks can occur.
Avoid contact with skin, eyes and clothing.
Avoid dust formation.
Avoid breathing dust.
Ensure adequate ventilation, especially in confined areas.
- Environmental precautions : Prevent product from entering drains.
- Methods for cleaning up : Sweep up or vacuum up spillage and collect in suitable container for disposal.
After cleaning, flush away traces with water.

7. HANDLING AND STORAGE

Handling

- Advice on safe handling : Avoid dust formation.

Storage

- Requirements for storage areas and containers : Keep in a dry place.
Keep away from heat.
- Advice on common storage : Protect from contamination.
Keep away from incompatible materials.
See chapter 10.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

- DNEL : End Use: Workers
Exposure routes: Skin contact
Potential health effects: Acute systemic effects
Value: 580 mg/kg bw/d
- : End Use: Workers
Exposure routes: Inhalation

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Potential health effects: Acute systemic effects
Value: 292 mg/m³

: End Use: Workers
Exposure routes: Skin contact
Potential health effects: Long-term systemic effects
Value: 580 mg/kg bw/d

: End Use: Workers
Exposure routes: Inhalation
Potential health effects: Long-term systemic effects
Value: 292 mg/m³

: End Use: Consumers
Exposure routes: Skin contact
Potential health effects: Acute systemic effects
Value: 580 mg/kg bw/d

: End Use: Consumers
Exposure routes: Inhalation
Potential health effects: Acute systemic effects
Value: 125 mg/m³

: End Use: Consumers
Exposure routes: Ingestion
Potential health effects: Acute systemic effects
Value: 42 mg/kg bw/d

: End Use: Consumers
Exposure routes: Skin contact
Potential health effects: Long-term systemic effects
Value: 580 mg/kg bw/d

: End Use: Consumers
Exposure routes: Inhalation
Potential health effects: Long-term systemic effects
Value: 125 mg/m³

: End Use: Consumers
Exposure routes: Ingestion
Potential health effects: Long-term systemic effects
Value: 42 mg/kg bw/d

PNEC : Fresh water
Value: 0,47 mg/l
Urea

Engineering measures

Avoid dust formation.

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Provide adequate ventilation.

Personal protective equipment

- Respiratory protection : Dust safety masks are recommended when the dust concentration is more than 10 mg/m³.
- Hand protection : Not applicable
- Eye protection : Safety goggles
- Skin and body protection : Lightweight protective clothing
- Hygiene measures : Keep away from food and drink.
When using do not eat, drink or smoke.
Wash hands before breaks and at the end of workday.
Shower or bathe at the end of working.
Take off immediately all contaminated clothing.
Keep working clothes separately.

Environmental exposure controls

- General advice : Prevent product from entering drains.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

- Form : prills
- Colour : white
- Odour : ammoniacal

Safety data

- Flash point : Note: Not applicable
- Flammability (solid, gas) : The product is not flammable.
- pH : 9,2 - 9,5 (100 g/l, 20 °C)
- Melting point : ca. 134 °C
- Density : > 1,3 g/cm³
- Relative density : 1,33
- Bulk density : 700 - 800 kg/m³

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Water solubility	: 624 g/l (20 °C) very soluble
Partition coefficient: n- octanol/water	: log Pow: -1,73 at 20 °C
Solubility in other solvents	: Medium: Acetone Note: very soluble
	Medium: Glycerol Note: soluble
	Medium: Ethanol Note: soluble
	Medium: Chloroform Note: insoluble
	Medium: Ether Note: insoluble
	Medium: Xylene Note: insoluble
Viscosity, dynamic	: Note: Not applicable

10. STABILITY AND REACTIVITY

Reactivity	: Stable at normal ambient temperature and pressure.
Materials to avoid	: Reacts violently with: Chlorine Sodium nitrate Phosphorus pentachloride Oxidizing agents sodium hypochlorite
Hazardous decomposition products	: Ammonia
Thermal decomposition	: > 130 °C Note: Ammonia gas may be liberated at high temperatures.
Hazardous reactions	: Potential for exothermic hazard

11. Toxicological information

Information on toxicological effects

Product

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Acute oral toxicity	: LD50: 14.300 mg/kg, Rat, OECD Test Guideline 401
Acute inhalation toxicity	: no data available
Acute dermal toxicity	: study scientifically unjustified
Skin corrosion/irritation	: Rabbit, OECD Test Guideline 404, No skin irritation
Serious eye damage/eye irritation	: Rabbit, OECD Test Guideline 405, No eye irritation
Respiratory or skin sensitisation	: No known effect.
Germ cell mutagenicity	
Genotoxicity in vitro	: Ames test, Result: negative
Assessment	: Not mutagenic in Ames Test
Carcinogenicity	: Rat, Oral, NCI screening study Animal testing did not show any carcinogenic effects.
Reproductive toxicity	: Rat, Dose: 500 mg/kg, Oral, Lowest observed adverse effect level Based on available data, the classification criteria are not met.
STOT - repeated exposure	: Rat, Oral, 365 d, NOAEL: 2.250 mg/kg, NCI screening study, Health injuries are not known or expected under normal use.
Further information	: According to our experience and to the information provided to us, the product does not have any harmful effects if it is used and handled as specified.

12. Ecological information

Toxicity

Product

Toxicity to fish	: LC50: > 6.810 mg/l, 96 h, Leuciscus idus (Golden orfe)
Toxicity to daphnia and other aquatic invertebrates	: EC50: > 10.000 mg/l, 24 h, Daphnia magna (Water flea), static test, Fresh water
Toxicity to algae	: NOEC: 47 mg/l, 192 h, Microcystis aeruginosa, Cell multiplication inhibition test, Fresh water

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Persistence and degradability

Product

Biodegradability : 96 %, Result: Readily biodegradable, activated sludge, Exposure time: 16 d, Water, OECD Test Guideline 302B

Bioaccumulative potential

Product

Bioaccumulation : Bioaccumulation not expected: Partition coefficient (n-octanol/water) log Pow < 3.

Mobility in soil

Product

Distribution among environmental compartments : Adsorption/Soil, Medium: Soil, Koc: 0,037 - 0,064, Adsorbs on soil.

Results of PBT and vPvB assessment

Product

Assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT)., This substance is not considered to be very persistent and very bioaccumulating (vPvB).

Other adverse effects

Product

Additional ecological information : The product is not considered hazardous for the environment.

13. DISPOSAL CONSIDERATIONS

- Product : Dispose of wastes in an approved waste disposal facility. Contact manufacturer. Contact the proper local authorities.
- : European waste code:
06 10: wastes from the MFSU of nitrogen chemicals, nitrogen chemical processes and fertiliser manufacture
- Contaminated packaging : In accordance with local and national regulations.

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14. TRANSPORT INFORMATION

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

15. REGULATORY INFORMATION

Chemical Safety Assessment : A Chemical Safety Assessment is not required for this substance.

National legislation

Water contaminating class (Germany) : WGK 1 slightly water endangering

Other regulations : Regulation (EC) No. 1831/2003 on additives for use in animal nutrition.
Licence number: α AT6035

16. OTHER INFORMATION

Further information

Other information : Issued in accordance with Article 32 of Regulation (EC) No 1907/2006, and its amendments.

Issuer : Borealis, Group Product Stewardship / Maarit Vakkala

Sources of key data used to compile the Safety Data Sheet : Chemical Safety Report, Urea. FARM REACH Consortium, 2014
International Chemical Safety Card, Urea, 1997
(http://www.ilo.org/dyn/icsc/showcard.display?p_lang=en&p_card_id=0595)

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Disclaimer

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