

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

1.1 Product identifier

Trade name

Urea

Identification numbers

CAS no. 57-13-6
EC no. 200-315-5

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

Relevant identified uses of the substance or mixture

antifreeze agent
Fertilizer
food additives
Feed additives.
Intermediate product
pH-regulating agent

Uses advised against

None known

1.3 Details of the supplier of the safety data sheet

Address

Ameropa AG
Rebgasse 108
CH-4102 Binningen

Telephone no. +41 61 301 2711
Fax no. +41 61 302 9863

Advice on Safety Data Sheet

info@umco.de

1.4 Emergency telephone number

For medical advice (in German and English):
+49 (0)551 192 40 (Giftinformationszentrum Nord)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification information

This product does not meet the classification and labelling criteria given in the Regulation (EC) No 1272/2008 (CLP).
This product does not meet the classification and labelling criteria given in the Dangerous Preparations Directive 67/548/EC (DSD)

2.2 Label elements

Not relevant

2.3 Other hazards

No data available.

SECTION 3: Composition/information on ingredients

3.1 Substances

Chemical characterization

Substance name urea

Identification numbers

CAS no. 57-13-6
EC no. 200-315-5

3.2 Mixtures

Not applicable. The product is not a mixture.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

In case of persisting adverse effects, consult a physician. Remove contaminated clothing and shoes immediately, and launder thoroughly before reusing.

After inhalation

Remove affected person from the immediate area. Ensure supply of fresh air.

After skin contact

Wash off immediately with soap and water.

After eye contact

Separate eyelids, wash the eyes thoroughly with water (15 min.). Seek medical assistance.

After ingestion

Rinse out mouth and give plenty of water to drink. Summon a doctor immediately. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

No data available.

4.3 Indication of any immediate medical attention and special treatment needed

No data available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Product itself is non-combustible; adapt fire extinguishing measures to surrounding areas.

Unsuitable extinguishing media

No data available.

5.2 Special hazards arising from the substance or mixture

In the event of fire, the following can be released: Nitrogen oxides (NO_x); Ammonia (NH₃); Isocyanic acid

5.3 Advice for firefighters

Use self-contained breathing apparatus. Wear protective clothing.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Refer to protective measures listed in sections 7 and 8. Ensure adequate ventilation. Avoid dust formation.

For emergency responders

No data available. Personal protective equipment (PPE) - see Section 8.

6.2 Environmental precautions

Do not discharge into the drains/surface waters/groundwater.

6.3 Methods and material for containment and cleaning up

Take up mechanically. Send in suitable containers for recovery or disposal.

6.4 Reference to other sections

No data available.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Provide good ventilation of working area (local exhaust ventilation, if necessary). Avoid the formation and deposition of dust.

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General protective and hygiene measures

Do not eat, drink or smoke during work time. Keep away from foodstuffs and beverages. Wash hands before breaks and after work. Do not inhale dust. Remove soiled or soaked clothing immediately.

Advice on protection against fire and explosion

Keep away from sources of heat and ignition.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions

Keep container tightly closed and dry in a cool, well-ventilated place.

Requirements for storage rooms and vessels

Store product in closed containers.

Advice on storage assembly

Do not store together with: Alkalies; Chlorine; Oxidizing agents

7.3 Specific end use(s)

No data available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

DNEL und PNEC values

DNEL values (worker)

No	Substance name			CAS / EC no	
	Route of exposure	Exposure time	Effect	Value	
1	urea			57-13-6 200-315-5	
	dermal	Short term (acute)	systemic	580	mg/kg/day
	dermal	Long term (chronic)	systemic	580	mg/kg/day
	inhalational	Short term (acute)	systemic	292	mg/m ³
	inhalational	Long term (chronic)	systemic	292	mg/m ³

DNEL value (consumer)

No	Substance name			CAS / EC no	
	Route of exposure	Exposure time	Effect	Value	
1	urea			57-13-6 200-315-5	
	oral	Short term (acute)	systemic	42	mg/kg/day
	oral	Long term (chronic)	systemic	42	mg/kg/day
	dermal	Short term (acute)	systemic	580	mg/kg/day
	dermal	Long term (chronic)	systemic	580	mg/kg/day
	inhalational	Short term (acute)	systemic	125	mg/m ³
	inhalational	Long term (chronic)	systemic	125	mg/m ³

PNEC values

No	Substance name			CAS / EC no	
	ecological compartment	Type		Value	
1	urea			57-13-6 200-315-5	
	water	fresh water		0,047	mg/l
	water	marine water		0,047	mg/l

8.2 Exposure controls

Appropriate engineering controls

No data available.

Personal protective equipment

Respiratory protection

If workplace exposure limits are exceeded, a respiration protection approved for this particular job must be worn. In case of dust formation, take appropriate measures for breathing protection in the event workplace threshold values are not specified.

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1.3.0, issued: 14.03.2012

Eye / face protection

Safety glasses with side protection shield (EN 166)

Hand protection

Protective gloves (EN 374); Sufficient protection is given wearing suitable protective gloves checked according to i.e. EN 374, in the event of risk of skin contact with the product. Before use, the protective gloves should be tested in any case for its specific work-station suitability (i.e. mechanical resistance, product compatibility and antistatic properties). Adhere to the manufacturer's instructions and information relating to the use, storage, care and replacement of protective gloves. Protective gloves shall be replaced immediately when physically damaged or worn. Design operations thus to avoid permanent use of protective gloves.

Other

Normal chemical work clothing.

Environmental exposure controls

No data available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form/Colour	
crystalline	
Odour	
No data available	
Odour threshold	
No data available	
pH value	
No data available	
Boiling point / boiling range	
No data available	
Melting point / melting range	
Value	134 °C
Source	CSR
Decomposition point / decomposition range	
Value	> 130 °C
Flash point	
No data available	
Auto-ignition temperature	
No data available	
Oxidising properties	
No data available	
Explosive properties	
No data available	
Flammability (solid, gas)	
No data available	
Lower flammability or explosive limits	
No data available	
Upper flammability or explosive limits	
No data available	
Vapour pressure	
Value	0,002 Pa
Reference temperature	25 °C
Source	CSR

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Vapour density	
No data available	
Evaporation rate	
No data available	
Relative density	
No data available	
Density	
Value	1,33 g/cm ³
Reference temperature	20 °C
Source	CSR
Solubility in water	
Value	624 g/l
Reference temperature	20 °C
Source	CSR
Solubility(ies)	
No data available	
Partition coefficient: n-octanol/water	
log Pow	1,73
Reference temperature	20 °C
Source	CSR
Viscosity	
No data available	

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available.

10.2 Chemical stability

No data available.

10.3 Possibility of hazardous reactions

No data available.

10.4 Conditions to avoid

Heat

10.5 Incompatible materials

Alcalis; Chlorine; Oxidizing agents

10.6 Hazardous decomposition products

Ammonia; Isocyanic acid; Nitrous oxides (NO_x)

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute oral toxicity	
LD50	1430 mg/kg
Species	rat
Method	OECD 401
Source	CSR

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Acute dermal toxicity	
No data available	
Acute inhalational toxicity	
No data available	
Skin corrosion/irritation	
Species	rabbit
Method	OECD 404
Source	CSR
Evaluation	non-irritant
Serious eye damage/irritation	
Species	rabbit
Method	OECD 405
Source	CSR
Evaluation	non-irritant
Respiratory or skin sensitisation	
Route of exposure	Skin
Source	CSR
Evaluation	non-sensitizing
Germ cell mutagenicity	
Type of examination	In vitro bacterial reverse mutation assay
Method	OECD 471
Source	CSR
Evaluation	negative
Reproduction toxicity	
Route of exposure	900
	500 mg/kg/d
Type of examination	LOAEL
Species	rat
Source	CSR
Carcinogenicity	
Route of exposure	oral
	2250 mg/kg/d
Type of examination	NOAEL
Species	rat
Source	CSR
STOT-single exposure	
No data available	
STOT-repeated exposure	
No data available	
Aspiration hazard	
No data available	

SECTION 12: Ecological information

12.1 Toxicity

Fish toxicity	
LC50	6810 mg/l
Duration of exposure	96 h
Species	Leuciscus idus
Source	CSR
Daphnia toxicity	
EC50	> 10000 mg/l
Duration of exposure	24 h
Species	Daphnia magna
Source	CSR

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Status: 14.03.2012

1.3.0, issued: 14.03.2012

Algae toxicity	
EC10	47 mg/l
Duration of exposure	192 h
Species	Microcystis aeruginosa (Blaualge)
Source	CSR

Bacteria toxicity	
No data available	

12.2 Persistence and degradability

No data available.

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water	
log Pow	1,73
Reference temperature	20 °C
Source	CSR

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

No data available.

12.6 Other adverse effects

No data available.

12.7 Other information

Other information
Do not discharge into the drains or waters and do not store on public depositories.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company.

Packaging

Residuals must be removed from packaging and when emptied completely disposed of in accordance with the regulations for waste removal. Incompletely emptied packaging must be disposed of in the form of disposal specified by the regional disposer.

SECTION 14: Transport information

14.1 Transport ADR/RID/ADN

The product is not subject to ADR/RID/ADN regulations.

14.2 Transport IMDG

The product is not subject to IMDG regulations.

14.3 Transport ICAO-TI / IATA

The product is not subject to ICAO-TI / IATA regulations.

14.4 Other information

No data available.

14.6 Special precautions for user

No data available.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not relevant

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulations

Council Directive 96/82/EC on the control of major-accident hazards involving dangerous substances

Remarks Annex I, part 1 + 2: not mentioned. With regard to possibly appropriate decomposition products see Chapter 10.

15.2 Chemical safety assessment

No data available.

SECTION 16: Other information

Sources of key data used to compile the data sheet:

EC Directive 67/548/EC resp. 99/45/EC as amended in each case.

Regulation (EC) No 1907/2006 (REACH), 1272/2008 (CLP) as amended in each case.

EC Directives 2000/39/EC, 2006/15/EC, 2009/161/EC

National Threshold Limit Values of the corresponding countries as amended in each case.

Transport regulations according to ADR, RID, IMDG, IATA as amended in each case.

The data sources used to determine physical, toxic and ecotoxic data, are indicated directly in the corresponding chapter.

Department issuing safety data sheet

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