

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date: 17.01.2014

Version: 1. 0

Revision: 17.01.2014

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

- **1.1 Product identifier**
- **Trade name:** Urea 46 (granulated / prilled)
- **Substance name:** Urea
- **CAS Number:**
57-13-6
- **EC number:**
200-315-5
- **Registration number:** 01-2119463277-33-xxxx
- **1.2 Relevant identified uses of the substance or mixture and uses advised against:** No further relevant information available.
- **Application of the substance / the preparation:**
Fertilizer
Chemicals for synthesis
- **1.3 Details of the supplier of the safety data sheet**
- **Supplier/Manufacturer:**
EuroChem Agro GmbH
Reichskanzler-Müller-Str. 23
68165 Mannheim Deutschland
Tel.: +49 621 87209-0
Fax: +49 621 87209-101
E-mail: info@eurochemagro.com
- **Email competent person:** sds@kft.de
- **Information department:** See supplier/manufacturer
- **1.4 Emergency telephone number:**
National Response Center (international)
TUIS-Emergency number: +49 621-60 43333

SECTION 2: Hazards identification

- **Classification according to Regulation (EC) No 1272/2008** The substance is not classified according to the CLP regulation.
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC** not applicable
- **Information concerning particular hazards for human and environment:**
Based on information available to us, the substance/the mixture is not a hazardous substance as defined by the Chemicals Act (ChemG), the Hazardous stances Ordinance, Regulation (EC) No. 1272/2008 and Directive 1999/45/EC in their latest versions.
No hazards to be particularly mentioned. Please note the information of this Material Safety Data Sheet.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Substance characteristics do not meet screening criteria.
- **vPvB:** Substance characteristics do not meet screening criteria.

SECTION 3: Composition/information on ingredients

- **3.1 Chemical characterization: Substances**
- **CAS No. Description:**
57-13-6 urea

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- **Identification number(s):**
 - **EC number:** 200-315-5
-

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
 - **General information:** If symptoms persist or in case of doubt, seek medical advice.
 - **After inhalation:** Supply fresh air; consult a doctor in case of pain.
 - **After skin contact:**
Wash with water and soap.
If skin irritation continues, consult a doctor.
 - **After eye contact:**
Rinse opened eye for several minutes under running water.
If symptoms persist, consult a doctor.
 - **After swallowing:**
Rinse out mouth and then drink plenty of water.
Do not induce vomiting.
Unless instructed explicitly by medical staff.
If symptoms persist, consult doctor.
 - **4.2 Most important symptoms and effects, both acute and delayed** Gastrointestinal disorder
 - **4.3 Indication of any immediate medical attention and special treatment needed** Symptomatic treatment
-

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
 - **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
The product is not combustible and does not support any combustion.
Use fire fighting measures suiting the environment.
 - **For safety reasons unsuitable extinguishing agents:** No data available
 - **5.2 Special hazards arising from the substance or mixture**
In case of fire, the following can be released:
Carbon monoxide (CO)
Carbon dioxide (CO₂)
Nitrogen oxides (NO_x)
Ammonia
Nitrous gases. Persons who may have inhaled nitrous gases are to be laid down and kept rested. Call a doctor immediately.
Persons who have inhaled fire effluents require medical observation for at least 48 hours. Symptoms of poisoning may even occur several hours after the accident.
 - **5.3 Advice for firefighters**
 - **Protective equipment:**
Wear self-contained respiratory protective device.
Do not inhale explosion gases or combustion gases.
 - **Additional information:**
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Collect contaminated fire fighting water separately. It must not enter the sewage system.
-

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective clothing.
Ensure adequate ventilation.
Avoid formation of dust.
Product forms slippery surface when combined with water.

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- **6.2 Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Do not allow to penetrate the ground/soil.
 - **6.3 Methods and material for containment and cleaning up:**
Pick up mechanically.
Avoid any dust formation. Pick up with a tested and approved industrial vacuum cleaner if necessary.
Make sure to recycle or dispose of in suitable receptacles.
 - **6.4 Reference to other sections**
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
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SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of dust.
Any deposit of dust which cannot be avoided must be regularly removed.
- **Information about protection against explosions and fires:**
The product is not flammable.
Dust may combine with air to form an explosive mixture.



Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.
Observe the general rules of industrial fire protection.

- **7.2 Conditions for safe storage, including any incompatibilities**
 - **Storage:**
 - **Requirements to be met by storerooms and receptacles:**
Store container tightly sealed at a cool and dry place with sufficient ventilation.
 - **Information about storage in one common storage facility:**
Store away from foodstuffs.
Store away from feed.
Refer to national regulations for storing hazardous chemicals.
 - **Further information about storage conditions:**
Store under dry conditions.
Protect from heat.
 - **Storage time:** 6 months
 - **Storage class:** 10-13 other combustible and non-combustible substances
 - **7.3 Specific end use(s)** No further relevant information available
-

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see section 7.
- **8.1 Control parameters**
- **Components with limit values that require monitoring at the workplace:** Not required
- **DNELs**
Abbreviations:
In = Industrial
Prof = Professional
Cons = Consumer

LLE = Long term, local effects
LSE = Long term, systemic effects

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SLE = Short term, local effects
 SSE = Short term, systemic effects

57-13-6 urea

Oral DNEL/Cons/LSE 42 mg/kg bw/day (human)
 DNEL/Cons/SSE 42 mg/kg bw/day (human)

Dermal DNEL/Cons/LSE 580 mg/kg bw/day (human)
 DNEL/Cons/SSE 580 mg/kg bw/day (human)
 DNEL/In/LSE 580 mg/kg bw/day (human)
 DNEL/In/SSE 580 mg/kg bw/day (human)

Inhalative DNEL/Cons/LSE 125 mg/m³ (human)
 DNEL/Cons/SSE 125 mg/m³ (human)
 DNEL/In/SLE 292 mg/m³ (human)
 DNEL/In/SSE 292 mg/m³ (human)

· PNECs

Abbreviations:
 aq = aqua
 sed = sediment

57-13-6 urea

PNEC/Aq 0.47 mg/l (fresh water)
 0.047 mg/l (marine water)

· CAS No. Designation of material % Type Value Unit**· Additional Occupational Exposure Limit Values for possible hazards during processing:**

Observe general threshold limit for dust.

· **Additional information:** The lists that were valid during the creation were used as basis.

· 8.2 Exposure controls**· Personal protective equipment:****· General protective and hygienic measures:**

The usual precautionary measures should be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Do not eat or drink while working.

Vacuum contaminated clothing. Do not blow or brush off contamination.

Avoid close or long term contact with skin.

Wash hands before breaks and at the end of work.

Use skin protection cream for skin protection.

· Breathing equipment:

At formation of dust:

Short term filter device (EN 149):

Filter P1

· Protection of hands:

Chemical resistant gloves (EN 374)

To avoid skin problems reduce the wearing of gloves to the required minimum.

Preventive skin protection by use of skin-protecting agents is recommended.

After use of gloves apply skin-cleaning agents and skin cosmetics.

· Material of gloves:

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

For undissolved solid substances following materials may be suitable:

nitrile rubber (NBR), butyl rubber (BR), fluorocarbon rubber (FKM) and polychloroprene rubber (CR)

· Penetration time of glove material:

The exact penetration time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:** Tightly sealed goggles

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- **Body protection:** Protective work clothing

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties	
· General Information:	
· Appearance:	
Form:	Granulate
Colour:	White
· Odour:	Odourless
· Odour threshold:	Not applicable
· pH-value (100 g/l) at 20 °C:	7.2
· Change in condition:	
Melting point/Melting range:	133 °C (DIN 53181)
Boiling point/Boiling range:	Not applicable
· Flash point:	Not applicable
· Flammability (solid, gaseous):	Product is not flammable.
· Ignition temperature:	Not determined
· Decomposition temperature:	> 132 °C
· Self ignition temperature:	Product is not self-igniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	Not applicable
Upper:	Not applicable
· Oxidizing properties:	Not determined
· Vapour pressure at 25 °C:	0.002 kPa
· Density at 20 °C:	1.33 g/cm ³
· Bulk density:	650-1350 kg/m ³
· Relative density:	Not determined
· Vapour density:	Not applicable
· Evaporation rate:	Not applicable
· Solubility in / Miscibility with	
Water at 20 °C:	~ 1000 g/l
· Partition coefficient (n-octanol/water) at 20 °C: 1.73 log POW	
· Viscosity:	
dynamic:	Not applicable
kinematic:	Not applicable
· 9.2 Other information	No further relevant information available

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications
To avoid thermal decomposition do not overheat.
Thermal decomposition starts at ~ 180-190 °C.

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- **10.3 Possibility of hazardous reactions**

As the product is supplied it is not capable of dust explosion. However, enrichment with fine dust causes risk of dust explosion. Reacts with sodium hypochlorite and calcium hypochlorite forming nitrogen trichloride - danger of explosion!

- **10.4 Conditions to avoid Heat**

- **10.5 Incompatible materials:**

Nitrites and other nitrosing agents

Strong oxidants

Acids

Ammonium nitrate

- **10.6 Hazardous decomposition products:**

No hazardous decomposition products if instructions for storage and handling are followed

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**

- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

57-13-6 urea

Oral LD₅₀ 14300 mg/kg (rat/male)

- **Primary irritant effect:**

- **on the skin:** No irritating effect

- **on the eye:** No irritating effect

- **On respiratory tract:** No irritating effect

- **Sensitization:** No sensitizing effects known

- **Other information (about experimental toxicology):**

- **Carcinogenic, mutagenic effects and adverse effects on reproduction:**

Toxicity to reproduction:

Teratogenicity:

Carcinogenicity:

No classification

- **Subacute to chronic toxicity:**

- **STOT-single exposure** No classification

- **STOT-repeated exposure:** No classification

- **Aspiration hazard** Not relevant

- **Toxicokinetics, metabolism and distribution:**

This substance and its metabolites do not accumulate in the organism but are excreted completely.

- **Repeated dose toxicity:**

57-13-6 urea

Oral LOAEL 2250 mg/kg bw/d (rat)

12 month

SECTION 12: Ecological information

- **12.1 Toxicity**

- **Aquatic toxicity:**

57-13-6 urea

LC₅₀/48h > 10000 mg/l (Daphnia magna)

LC₅₀/96h > 6810 mg/l (Leuciscus idus)

NOEC 47 mg/l (Microcystis aeruginosa)

8 d

- **12.2 Persistence and degradability** Readily biodegradable

- **12.3 Bioaccumulative potential** log POW < 0 - not lipophilic, no bioaccumulation

- **12.4 Mobility in soil** No further relevant information available

- **Adsorption coefficient Koc:** 0.037-0.064

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- **Additional ecological information:**
 - **AOX-indication:** The product does not contain any organic halogen compound.
 - **General notes:**
Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous to water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Danger to drinking water is possible if large quantities leak into the ground or into water course.
 - **12.5 Results of PBT and vPvB assessment**
 - **PBT:** Substance characteristics do not meet screening criteria.
 - **vPvB:** Substance characteristics do not meet screening criteria.
 - **12.6 Other adverse effects** No further relevant information available
-

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
 - **Recommendation:**
Must be recycled or disposed of according to the regulations. Waste has to be classified according to the European Waste Catalogue based on the identification of the waste generating source.
 - **European waste catalogue:**
07 00 00 WASTES FROM ORGANIC CHEMICAL PROCESSES
07 07 00 wastes from the MFSU of fine chemicals and chemical products not otherwise specified
07 07 99 wastes not otherwise specified
 - **Uncleaned packagings:**
 - **Recommendation:**
Disposal must be made according to official regulations.
Packagings that cannot be cleaned are to be disposed of in the same manner as the product.
Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.
-

SECTION 14: Transport information

· 14.1 UN-Number	
· ADR, ADN, IMDG, IATA	Void
· 14.2 UN proper shipping name	
· ADR, ADN, IMDG, IATA	Void
· 14.3 Transport hazard class(es)	
· ADR, ADN, IMDG, IATA	
· Class	Void
· 14.4 Packing group	
· ADR, IMDG, IATA	Void
· 14.5 Environmental hazards:	Not applicable
· 14.6 Special precautions for user	Not applicable
· 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable
· Transport/Additional information:	Not dangerous according to the above regulations
· UN "Model Regulation":	-

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SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **National regulations**
- **Water hazard class:**
Ident number.: 118
Water hazard class 1 (Assessment by list): slightly hazardous for water
- **Further information:**
For this substance/mixture no safety data sheet needs to be generated according to Article 31(1) of Regulation (EC) No 1907/2006. The here presented safety data sheet may therefore not fulfil all requirements of Annex II of this regulation.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing MSDS:**
KFT Chemieservice GmbH
Im Leuschnerpark. 3 64347 Griesheim
Postfach 1451 64345 Griesheim
Germany

Phone: +49 6155 86829-0 Fax: +49 6155 86829-25
Safety Data Sheet Service: +49 6155 86829-22
- **Contact:** Barbara Stark
- **Abbreviations and acronyms:**
ICAO: International Civil Aviation Organization
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
MAL-Code: Måleteknisk Arbejdshygiejnisk Luftbehov (Regulation for the labeling concerning inhalation hazards, Denmark)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
- **Sources:**
Data of supplier
IUCLID-Dossier from ECHA
GESTIS-database