

KOCH FERTILIZER TRADING Sarl

## 1. Identification

<b>GHS product identifier</b>	<b>Urea</b>
<b>MSDS Number</b>	KFT_Urea_GHS_EN
<b>Version #</b>	01
<b>Issue date</b>	02-24-2012
<b>CAS #</b>	57-13-6
<b>Recommended use</b>	Fertilizer.
<b>Recommended Restrictions</b>	None known.
<b>Synonym(s)</b>	Carbamide, Carbamidic Acid
<b>Manufacturer information</b>	Koch Fertilizer Trading Sarl 20, route de Pre-Bois Case Postale 1843 Geneva Switzerland kochmsds@kochind.com +11 41 227 37 4223 or +1 316 828 7672 For Chemical Emergency Call CHEMTREC day or night USA/Canada - 1.800.424.9300 Outside USA/Canada 1.703.527.3887 (collect calls accepted)

## 2. Hazards identification

<b>GHS classification</b>	
<b>Physical hazards</b>	Not classified.
<b>Health hazards</b>	Not classified.
<b>Environmental hazards</b>	Not classified.

### Precautionary statement

<b>Prevention</b>	Use personal protective equipment as required.
<b>Response</b>	Get medical advice/attention if you feel unwell.
<b>Storage</b>	Store away from incompatible materials.
<b>Disposal</b>	Dispose of waste and residues in accordance with local authority requirements.

### Specific hazards

Dust may irritate skin. High concentrations of dust may irritate throat and respiratory system and cause coughing. Accidental ingestion of urea fertilizer caused nausea, persistent violent vomiting, excitement and convulsions. Complete recovery was observed within a few days. However, ingestion is not likely to be a primary route of occupational exposure.

## 3. Composition/information on ingredients

Non-hazardous components	CAS #	Percent
Urea*	57-13-6	95 - 100

**Composition comments**      \*Treated with a non-hazardous anti-caking agent, less than 1% by weight. This Safety Data Sheet is not a guarantee of product specification or NPK value(s). NPK content is on specified sales orders, customer invoices, or product specification sheets obtained from supplier.

## 4. First aid measures

### First aid procedures

<b>Inhalation</b>	Move to fresh air. Get medical attention if any discomfort continues.
<b>Skin</b>	Wash contact areas with soap and water. Get medical attention if irritation develops and persists.
<b>Eye</b>	Dust in the eyes: Do not rub eyes. Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention if irritation persists after washing.
<b>Ingestion</b>	Rinse mouth thoroughly. Get medical attention if any discomfort continues.
<b>Most important symptoms and effects, both acute and delayed</b>	Symptoms can include irritation, redness, scratching of the cornea, and tearing.
<b>Notes to physician</b>	Treat symptomatically.

**General advice** Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

## 5. Fire-fighting measures

**Suitable extinguishing media** Use fire-extinguishing media appropriate for surrounding materials.

**Unsuitable extinguishing media** None known.

**Specific hazards arising from the chemical** Fire will produce irritating, corrosive and/or toxic gases.

**Protective equipment and precautions for firefighters** Move containers from fire area if you can do it without risk. Use water spray to prevent dust formation, absorb heat, keep containers cool and protect fire-exposed material.

## 6. Accidental release measures

**Personal precautions** Avoid inhalation of dust and contact with skin and eyes. Ensure adequate ventilation. Wear suitable protective clothing. Use personal protection recommended in Section 8 of the MSDS.

**Environmental precautions** Prevent further leakage or spillage if safe to do so. Do not allow to enter drains, sewers or watercourses.

**Methods for containment** Stop the flow of material, if this is without risk. If sweeping of a contaminated area is necessary use a dust suppressant agent which does not react with the product.

**Methods for cleaning up** Avoid dust formation. After removal flush contaminated area thoroughly with water.

Never return spills to original containers for re-use.

## 7. Handling and storage

**Handling** Avoid inhalation of dust and contact with skin and eyes. Use only with adequate ventilation. Use work methods which minimize dust production. Keep the workplace clean.

**Storage** Store in a well-ventilated place. Store in a cool, dry place. Keep container tightly closed. Store away from incompatible materials.

## 8. Exposure controls / personal protection

**Occupational exposure limits** No exposure limits noted for ingredient(s).

**Recommended monitoring procedures** Follow standard monitoring procedures.

**Engineering controls** Provide adequate ventilation. Observe Occupational Exposure Limits and minimize the risk of inhalation of dust.

### Personal protective equipment

**Eye/face protection** Use tight fitting goggles if dust is generated.

**Skin protection** Risk of contact: Wear appropriate clothing to prevent any possibility of skin contact.

**Respiratory protection** If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. No specific recommendation made, but protection against nuisance dust must be used when the general level exceeds 10 mg/m<sup>3</sup>.

**Hand protection** Risk of contact: Wear protective gloves. Suitable gloves can be recommended by the glove supplier.

## 9. Physical and chemical properties

**Appearance** White granules with faint ammonia odor.

**Physical state** Solid.

**Color** White.

**Form** Granular. Pellets. Prilled.

**Odor** Ammonia-like. Faint, characteristic.

**Odor threshold** Not available.

**pH** 8 - 8.5 10% solution

**Melting point/Freezing point** 270.9 °F (132.7 °C)

**Boiling point** Not available.

**Flash point** Not available.

**Evaporation rate** Not available.

**Flammability (solid, gas)** Not available.

**Flammability limits in air, lower, % by volume** Not available.

<b>Flammability limits in air, upper, % by volume</b>	Not available.
<b>Vapor pressure</b>	Not available.
<b>Vapor density</b>	Not available.
<b>Relative density</b>	1.335 (water=1)
<b>Solubility (H2O)</b>	Soluble.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Bulk density</b>	48 - 52 lb/ft <sup>3</sup> (Packed)
<b>Molecular weight</b>	60.06 g/mol

## 10. Stability and reactivity

<b>Chemical stability</b>	Normally stable. May gradually give off ammonia. The product is hygroscopic and will absorb water by contact with the moisture in the air.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid</b>	Moisture. High temperatures. Contact with incompatible materials.
<b>Incompatible materials</b>	Reacts violently with strong oxidants, nitrites, inorganic chlorides, chlorites and perchlorates causing fire and explosion hazard.
<b>Hazardous decomposition products</b>	Carbon oxides. Nitrogen oxides (NOx). Ammonia. Biuret.

## 11. Toxicological information

### Toxicological data

#### Product

#### Test Results

Urea\* (57-13-6)

Acute Oral LD50 Rat: 8471 mg/kg

<b>Routes of exposure</b>	Eye contact. Skin contact. Inhalation.
<b>Toxicological information</b>	Occupational exposure to the substance or mixture may cause adverse effects.
<b>Acute toxicity</b>	Dust in the eyes will cause irritation. Dust may irritate skin. High concentrations of dust may irritate throat and respiratory system and cause coughing.
<b>Skin corrosion/irritation</b>	May cause skin irritation.
<b>Serious eye damage/eye irritation</b>	Direct contact with eyes may cause temporary irritation.
<b>Respiratory sensitization</b>	No data available.
<b>Skin sensitization</b>	Not a skin sensitizer.
<b>Mutagenicity</b>	No data available.
<b>Carcinogenicity</b>	Not classifiable as to carcinogenicity to humans.
<b>Reproductive toxicity</b>	No data available.
<b>Specific target organ toxicity - single exposure</b>	No data available.
<b>Specific target organ toxicity - repeated exposure</b>	No data available.
<b>Aspiration hazard</b>	No data available.
<b>Chronic effects</b>	Frequent inhalation of dust over a long period of time increases the risk of developing asthma, chronic lung diseases, and skin irritation.
<b>Symptoms</b>	Symptoms can include irritation, redness, scratching of the cornea, and tearing.
<b>Other information</b>	No other specific acute or chronic health impact noted.

## 12. Ecological information

### Ecotoxicological data

#### Product

#### Test Results

Urea\* (57-13-6)

EC50 Water flea (Daphnia magna): 3910 mg/l 48 hours

<b>Ecotoxicity</b>	The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
<b>Environmental effects</b>	The product may cause risk of hazardous effects to the environment.
<b>Persistence / degradability</b>	Not available.
<b>Bioaccumulation</b>	No data available.
<b>Mobility</b>	The product is water soluble and may spread in water systems.
<b>Other adverse effects</b>	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

### 13. Disposal considerations

<b>Disposal methods</b>	Dispose of this material and its container to hazardous or special waste collection point. Do not allow this material to drain into sewers/water supplies. Dispose in accordance with all applicable regulations.
<b>Contaminated packaging</b>	Since emptied containers may retain product residue, follow label warnings even after container is emptied.

### 14. Transport information

#### ADR

Not regulated as dangerous goods.

#### IATA

Not regulated as dangerous goods.

#### IMDG

Not regulated as dangerous goods.

#### RID

Not regulated as dangerous goods.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** No information available.

### 15. Regulatory information

#### Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

## 16. Other information

### Disclaimer

NOTICE: The information presented herein is based on data considered to be accurate as of the date of preparation of this Safety Data Sheet (SDS) and was prepared pursuant to Government regulation(s) that identify specific types of information to be provided. This SDS may not be used as a commercial specification sheet of manufacturer or seller, and no warranty or representation, expressed or implied, is made as to the accuracy or comprehensiveness of the foregoing data and safety information, nor is any authorization given or implied to practice any patented invention without a license. Additional information may be needed to evaluate other uses of the product, including use of the product in combination with any materials or in any processes other than those specifically referenced. Information provided herein with respect to any hazards that may be associated with the product is not meant to suggest that use of the product in a given application will necessarily result in any exposure or risk to workers or the general public. No responsibility can be assumed by vendor for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices, or from any hazards inherent in the nature of the product. Purchasers and users assume all risk of use, storage and handling of the product in compliance with applicable federal, state and local laws and regulations. Purchasers and users of the product specifically should advise all of their employees, agents, contractors and customers who will use the product of this (M)SDS.

### Revision date

04-17-2012