

# Safety Data Sheet

In accordance with Commission Regulation (EU) No 2020/878



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Revision: 1

## Urea

| SECTION 1 |  | Identification of the substance/mixture and of the company/undertaking  |
|-----------|--|---|
| 1.1       | <b>Product identifier</b>  |   |
|           | <b>Trade name</b>  | Granular urea, crystalline urea, industrial urea, animal feed urea, miniprill urea, minipril urea low in biuret, Fertibersol Cristal, Fertibersol Ural, Technical Urea, Urea Feed, Urea deNOx, Crystalline Urea low in biuret.  |
|           | <b>Code</b>  | FDS-001   |
|           | <b>Chemical name</b>   | Urea  |
|           | <b>Chemical formula</b>  | CH <sub>4</sub> N <sub>2</sub> O  |
|           | <b>Index Number</b>  | Not applicable.   |
|           | <b>EINECS Number</b>   | 200-315-5   |
|           | <b>CAS Number</b>  | 57-13-6   |
|           | <b>Registration Number</b>   | -   |
|           | <b>UFI</b>   | No applicable since it's a substance  |
| 1.2       | <b>Relevant identified uses of the substance or mixture and uses advised against</b> |   |
|           | <b>Application of the substance / the mixture</b>                                    | <p><b>Industrial uses:</b> Fertilizer use; cleaning and maintenance products; resin and polymers manufacture - intermediate; raw material in the cement and glass industry; production of pharmaceuticals; raw material for further synthesis; manufacture of fungicides; manufacture of fire resistance products; use in cosmetic industry; use as laboratory agent; use of processing aids; use as plant protection products -Industrial formulation and packing; professional and consumer end-use; soil remediation; manufacture and application of powder coatings, all other coatings and inks; waste gas treatment - Nox reduction; manufacture of textiles, leather, fur; use as nutrient in sewage treatment plants; de-icing agent; use in biocides.</p> <p><b>Professional uses:</b> Fertilizer use; resin and polymers manufacture.</p> <p><b>Consumer uses:</b> Fertilizer use;use in cosmetics.</p> |
|           | <b>Uses advised against</b>  | Others than those indicated.  |

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|------------|---|---|
| <b>1.3</b> | <b>Details of the supplier of the safety data sheet</b> | Fertiberia, S.A.<br>27, Agustín de Foxa Street pta. 11 28036 Madrid Madrid (Spain)<br>+34 91.586.62.00; fdsinfo@grupofertiberia.com     |
| <b>1.4</b> | <b>Emergency telephone number</b>                       | Palos factory: +34 959.49.24.00; Puertollano factory: +34 926.44.93.00 (Only available during office hours; Monday-Friday; 08:00-18:00) |

### SECTION 2 Hazards identification

|            |   |   |
|------------|---|---|
| <b>2.1</b> | <b>Classification of the substance or mixture according Regulation (EC) n° 1272/2008 (CLP)</b>  | This substance is not classified as dangerous according to Regulation (EC) No 1272/2008 [EU-GHS / CLP]. |
| <b>2.2</b> | <b>Label elements</b>   |   |
|            | <b>Hazard pictograms</b>  | Not applicable.   |
|            | <b>Signal word</b>  | Not applicable.   |
|            | <b>Hazard-determining components of labelling</b>   | Not applicable.   |
|            | <b>Hazard statements</b>  | Not applicable.   |
|            | <b>Precautionary statements</b>   | P102 Keep out of reach of children.<br>P270 Do not eat, drink or smoke when using this product.         |
|            | <b>Additional information</b>   | Not applicable.   |
|            | <b>Supplemental information on the label</b>  | Not applicable.   |
|            | <b>Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles</b> | Not applicable.   |
|            | <b>Special packaging requirements</b>   | Not applicable.   |

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|                  |  |  |                   |
|------------------|--|--|-------------------|
|                  | <b>Containers to be fitted with child-resistant fastenings</b>     | Not applicable.  |                   |
|                  | <b>Tactile hazard warning</b>                                      | Not applicable.  |                   |
| <b>2.3</b>       | <b>Other hazards</b>   |  |                   |
|                  | <b>Other hazards which do not result in classification</b>         | None known.  |                   |
|                  | <b>Results of the PBT and vPvB assessment</b>                      | Not applicable.  |                   |
| <b>SECTION 3</b> | <b>Composition/information on ingredients</b>                      |  |                   |
| <b>3.1</b>       | <b>Substances</b>  |  |                   |
|                  | <b>Name</b>  | <b>EC Number</b>   | <b>CAS Number</b> |
|                  | Urea   | 200-315-5  | 57-13-6           |
| <b>3.2</b>       | <b>Mixtures</b>  |  |                   |
|                  | Not applicable.  |  |                   |
|                  | <b>Additional indications</b>                                      | For the wording of the listed hazard phrases refer to section 16.  |                   |
| <b>SECTION 4</b> | <b>First aid measures</b>  |  |                   |
| <b>4.1</b>       | <b>Description of first aid measures</b>                           |  |                   |
|                  | <b>General information</b>   | Provide medical assistance to those affected. People who dispense first aid are advised to wear personal protective equipment. There may be delayed effects on exposure. |                   |
|                  | <b>Inhalation</b>  | Remove from exposure. In severe cases, or if recovery is not rapid or complete, seek medical attention.  |                   |
|                  | <b>Ingestion</b>   | Rinse mouth with water. Do not induce vomiting. If patient is conscious, give water to drink. If patient feels unwell, seek medical attention.                           |                   |
|                  | <b>Skin contact</b>  | Rinse with plenty of water. Remove contaminated clothing and wash before reuse. If irritation persists, seek medical attention.  |                   |
|                  | <b>Eye contact</b>   | Irrigate with plenty of water for at least 10 minutes. Get medical attention.  |                   |
| <b>4.2</b>       | <b>Most important symptoms and effects, both acute and delayed</b> |  |                   |
|                  | <b>Eye contact</b>   | Redness, itching, burning.   |                   |
|                  | <b>Inhalation</b>  | Difficulty in breathing.   |                   |
|                  | <b>Skin contact</b>  | No significant effects or critical hazards are known.  |                   |
|                  | <b>Ingestion</b>   | Nausea, vomiting, coughing,  |                   |

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|------------------------------------|--|--|
| <b>4.3</b>                         | <b>Indication of any immediate medical attention and special treatment needed</b>  |  |
|                                    | No action involving personal risk or without adequate training should be taken. Avoid direct mouth-to-mouth resuscitation, as it can be dangerous for the person providing the help. Use other methods for resuscitation, preferably oxygen or compressed air equipment. Treat according to the following indications:   |  |
|                                    | <b>Notes to physician</b>  | Treat symptomatically.   |
|                                    | <b>Specific treatments</b>   | There is no specific treatment. It depends on specialized medical observation. |
| <b>SECTION 5</b>                   |  |  |
| <b>Firefighting measures</b>       |  |  |
| <b>5.1</b>                         | <b>Extinguishing media</b>   |  |
|                                    | The product is not flammable.  |  |
|                                    | <b>Suitable extinguishing agents</b>   | Dry powder, carbon dioxide (CO <sub>2</sub> ), foam.                           |
|                                    | <b>Unsuitable extinguishing agents for safety reasons</b>  | None.  |
| <b>5.2</b>                         | <b>Special hazards arising from the substance or mixture</b>   |  |
|                                    | Formation of toxic gases is possible during heating or in case of fire.  |  |
|                                    | <b>Hazardous thermal decomposition products</b>  | Carbon oxides Nitrogen oxides (NO <sub>x</sub> ) Ammonia                       |
| <b>5.3</b>                         | <b>Advice for firefighters</b>   |  |
|                                    | Open warehouse doors and windows for maximum ventilation.<br>Fire-fighting personnel should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face mask operating in positive pressure mode. Clothing for fire-fighting personnel (including helmets, protective boots) should conform to European standard EN 469 and gloves to EN 659. It should provide a basic level of protection for chemical incidents and should be fire resistant. The facility shall have sufficient protective equipment available to deal with fires.  |  |
| <b>SECTION 6</b>                   |  |  |
| <b>Accidental release measures</b> |  |  |
| <b>6.1</b>                         | <b>Personal precautions, protective equipment and emergency procedures</b>   |  |
|                                    | Wear protective clothing.  |  |
|                                    | <b>For non-emergency personnel</b>   |  |
|                                    | Do not breathe vapors or spray mist. Avoid contact with skin, eyes and clothing. In case of non-flammable spills and leaks, wear vapor protective clothing. Stop leak if you can do so without risk. Keep unnecessary persons away, isolate the danger area and prevent entry. Eliminate sources of combustion.<br>Keep upwind, out of low areas and ventilate confined spaces before entering. Assess the affected area to determine if evacuation is necessary. If it is necessary to evacuate the danger zone, you should follow the advice of an expert. If sheltering in place, tape windows and doors, close outside air intakes (attic fans, etc.) and place a damp towel or cloth over your face (if necessary). |  |

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|                  |  |   |
|------------------|--|---|
|                  | <b>For emergency responders</b>  |   |
|                  | If specialized clothing is required to deal with the spill, make note of any information on suitable and unsuitable materials. See also the information in "For non-emergency personnel".  |   |
| <b>6.2</b>       | <b>Environmental precautions</b>   |   |
|                  | In case of accidental spills and leaks avoid dispersal of spilled material, runoff and contact with soil, watercourses (surface and groundwater), drains and sewers. Inform the competent authorities if the product has caused adverse impacts (sewers, watercourses, soil or air).   |   |
| <b>6.3</b>       | <b>Methods and material for containment and cleaning up</b>  |   |
|                  | In case of accidental spills and leaks, avoid dispersal of spilled material. Use water spray or foam to control vapors. Make a protective barrier and ensure closure of drains with suitable containment material. Absorb with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Sweep and shovel into suitable containers for disposal. |   |
| <b>6.4</b>       | <b>Reference to other sections</b>   |   |
|                  | See Section 1 for information on contact in case of emergency.<br>See Section 8 for information on personal protection equipment.<br>See Section 13 for disposal information.  |   |
| <b>SECTION 7</b> | <b>Handling and storage</b>  |   |
| <b>7.1</b>       | <b>Precautions for safe handling</b>   |   |
|                  | <b>Technical precautionary measures</b>  | Wear appropriate personal protective equipment. Avoid contact with eyes, skin or clothing. Do not breathe vapors or mist. Do not ingest. Avoid release to the environment. Keep in original container or approved alternative made of a compatible material, kept tightly closed when not in use. Empty containers retain product residues and may be hazardous. Do not reuse container. Avoid handling incompatible substances, see section 7.2. and 10. |
|                  | <b>Advice on general occupational hygiene</b>  | Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.   |

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|  |   |  |                 |                               |
|--|---|--|-----------------|-------------------------------|
| <b>7.2</b>   | <b>Conditions for safe storage, including any incompatibilities</b>   |  |                 |                               |
|  | <p>Avoid contact and packaging with incompatible substances or mixtures. See section 10;<br/>           Avoid proximity to potential sources of ignition (including electrical equipment);<br/>           Store in a place that avoids adverse weather conditions (high temperatures);<br/>           Avoid direct sunlight;<br/>           Ensure good ventilation of the storage area.<br/>           Ensure that the quantities that can be stored are not exceeded. See section 15.</p> |  |                 |                               |
| <b>7.3</b>   | <b>Specific end use(s)</b>  |  |                 |                               |
|  | Use only as described in section 1.2.   |  |                 |                               |
| <b>SECTION 8 Exposure controls/personal protection</b> |   |  |                 |                               |
| <b>8.1</b>   | <b>Control parameters</b>   |  |                 |                               |
|  | <b>Occupational exposure limits</b>   | There is no limit of occupational exposure value.  |                 |                               |
|  | <b>Recommended monitoring procedures</b>  | <p>If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of ventilation or other control measures and/or the need to use respiratory protective equipment. Monitoring standards such as the following may be used as reference: European Standard EN 689 (Atmospheres in the workplace. Guidelines for the evaluation of inhalation exposure of chemical agents for comparison with limit values and measurement strategy), European Standard EN 14042 (atmospheres in the workplace. Guidelines for the application and use of procedures to assess exposure to chemical and biological agents) European Standard EN 482 (atmospheres in the workplace. General requirements for the performance of procedures for measuring chemical agents). National guidance documents on methods for the determination of hazardous substances should also be used as a reference.</p> |                 |                               |
|  | <b>Derived effect levels</b>  | No DELs available.   |                 |                               |
|  | <b>Predicted effect concentrations</b>  | No PECs available.   |                 |                               |
|  | <b>Ingredients with limit values that require monitoring at the workplace</b>   | Not required.  |                 |                               |
| <b>DNEL</b>  |   |  |                 |                               |
| <b>Substance</b>                                       |   |  | 57-13-6         |                               |
|  |   |  | Urea            |                               |
|  | <b>Inhalation (mg/m3)</b>   | <b>Long-term</b>   | <b>Systemic</b> | 292 mg/m3                     |
|  |   |  | <b>Local</b>    | 292 mg/m3                     |
|  |   | <b>Short-term</b>  | <b>Systemic</b> | No hazard has been identified |

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|                                |                       |                    |                               |   |   |
|--------------------------------|-----------------------|--------------------|-------------------------------|---|---|
| Industrial/Professional worker | Dermal (mg/kg pc/día) | term               | Local                         | No hazard has been identified   |   |
|                                |                       | Long-term          | Systemic                      | 580 mg/kg bw/d  |   |
|                                |                       |                    | Local                         | 580 mg/kg bw/d  |   |
|                                |                       | Short-term         | Systemic                      | No hazard has been identified   |   |
|                                | Local                 |                    | No hazard has been identified |   |   |
|                                | Ocular (mg/kg pc/día) | Long-term          | Systemic                      | Not available   |   |
|                                |                       |                    | Local                         | Not available   |   |
|                                |                       | Short-term         | Systemic                      | No hazard has been identified   |   |
|                                |                       |                    | Local                         | No hazard has been identified   |   |
|                                | Consumer              | Inhalation (mg/m3) | Long-term                     | Systemic  | 125 mg/m3   |
|                                |                       |                    |                               | Local   | 125 mg/m3   |
|                                |                       |                    | Short-term                    | Systemic  | Hazards are unknown but no further information is needed as no exposure to the substance is expected to occur |
| Local                          |                       |                    |                               | Hazards are unknown but no further information is needed as no exposure to the substance is expected to occur |   |
| Dermal (mg/kg pc/day)          |                       | Long-term          | Systemic                      | 580 mg/kg bw/d  |   |
|                                |                       |                    | Local                         | 580 mg/kg bw/d  |   |
|                                |                       | Short-term         | Systemic                      | No hazard has been identified   |   |
|                                |                       |                    | Local                         | No hazard has been identified   |   |
| Oral (mg/kg pc/day)            |                       | Long-term          | Systemic                      | 42 mg/kg bw/d   |   |
|                                |                       |                    | Local                         | 42 mg/kg bw/d   |   |
|                                |                       | Short-term         | Systemic                      | No hazard has been identified   |   |
|                                |                       |                    | Local                         | No hazard has been identified   |   |
| Ocular (mg/kg pc/day)          |                       | Long-term          | Systemic                      | Not available   |   |
|                                |                       |                    | Local                         | Not available   |   |
|                                |                       | Short-term         | Systemic                      | No hazard has been identified   |   |
|                                |                       |                    | Local                         | No hazard has been identified   |   |
| <b>PNEC</b>                    |                       |                    |                               |   |   |
| <b>Substance</b>               |                       |                    |                               | 57-13-6   |   |
|                                |                       |                    |                               | Urea  |   |
| <b>Fresh water (mg/L)</b>      |                       |                    |                               | 0,47  |   |
| <b>Salt water (mg/L)</b>       |                       |                    |                               | 0,047   |   |

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|            |   |  |  |
|------------|---|--|--|
|            | STP (mg/L)  | No hazard has been identified  |  |
|            | Fresh water sediment (mg/L)                           | Sediments are not expected to be exposed to the substance  |  |
|            | Salt water sediment (mg/L)                            | Sediments are not expected to be exposed to the substance  |  |
|            | Air (mg/L)  | No hazard has been identified  |  |
|            | Soil (mg/L)   | Soil is not expected to be exposed to the substance  |  |
|            | Predators (secondary poisoning) (mg/L)                | The substance has no bioaccumulation potential   |  |
|            | Components with biological limit values               | Non-existent.  |  |
|            | Additional indications                                | The Occupational exposure limits lists valid during the making were used as basis.   |  |
| <b>8.2</b> | <b>Exposure controls</b>                              |  |  |
|            | <b>Appropriate engineering controls</b>               | <ul style="list-style-type: none"> <li>- Ensure adequate ventilation.</li> <li>- Apply technical measures to comply with professional exposure limits.</li> <li>- Consult the protective measures listed in sections 7 and 8.</li> </ul> |  |
|            | <b>Personal protective measures, such as personal</b> | <b>General protection and hygiene measures</b>   | Wash completely the hands, forearms and face after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.<br>Use the appropriate techniques to remove the contaminated clothes. Wash the contaminated clothes before reusing. Verify that the eyes washing stations and safety showers were near to working stations. |
|            |   | <b>Respiratory protection</b>  | If dust concentration is high and/or ventilation is inadequate, use a dust mask or a mask with a suitable filter (e.g. EN 143, 149, filter P1).  |
|            |   | <b>Hand protection</b>   | Wear suitable gloves (e.g. rubber or PVC) when handling the product for long periods of time.  |
|            |   | <b>Glove material</b>  | Nitrile rubber, NBR  |
|            |   | <b>Other</b>   | Use personal protective equipment during use and handling of the product.  |



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|  |  |                            |   |
|--|--|----------------------------|---|
|  | <b>protective equipment</b>            | <b>Eye/face protection</b> | Safety eyewear complying with an approved standard EN 166:2002 should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. If contact is possible, use the following protection, unless the assessment indicates a higher degree of protection: safety glasses with side shields.<br>Recommended: Eyewear, mask or other protection that covers the entire face must be used if there is a possibility of being exposed to aerosols or splashes, or if hot material is handled. |
|  |  | <b>Thermal hazards</b>     | Not available.  |
|  | <b>Environmental exposure controls</b> |                            | General ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.   |

### SECTION 9 Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

|   |  |
|---|--|
| <b>Appearance</b>                                   | Granulate  |
| <b>Colour</b>                                       | White  |
| <b>Odour</b>  | Odourless  |
| <b>pH</b>   | 9.2-9.5  |
| <b>Melting point/freezing point</b>                 | 135 ° C  |
| <b>Initial boiling point and boiling range</b>      | Undetermined   |
| <b>Flash point</b>                                  | Not applicable due to physico-chemical characteristics |
| <b>Evaporation rate</b>                             | Not available  |
| <b>Flammability</b>                                 | Non-flammable  |
| <b>Upper/lower flammability or explosive limits</b> |  |
| <b>Lower</b>  | Not available.   |
| <b>Upper</b>  | Not available.   |
| <b>Vapour pressure</b>                              | Not applicable due to physico-chemical characteristics |
| <b>Vapour density</b>                               | Not available.   |
| <b>Relative density</b>                             | Not available  |
| <b>Solubility</b>                                   |  |
| <b>In water</b>                                     | at 20 ° C <span style="float: right;">800 g/l</span>   |

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|            |   |  |               |
|------------|---|--|---------------|
|            | <b>Partition coefficient: n-octanol/water</b>             | at 20 ° C  | -1.73 log POW |
|            | <b>Auto-ignition temperature</b>                          | Not available.   |               |
|            | <b>Decomposition temperature</b>                          | >134 ° C   |               |
|            | <b>Viscosity</b>  |  |               |
|            | <b>Kinematic</b>  | Not available.   |               |
|            | <b>Dynamic</b>  | Not available.   |               |
|            | <b>Explosive properties</b>                               | The product is not explosive                           |               |
|            | <b>Oxidising properties</b>                               | Not available  |               |
| <b>9.2</b> | <b>Other information</b>                                  |  |               |
|            | <b>Appearance</b>   | Granulated.  |               |
|            | <b>Explosives properties</b>                              | Not explosive.   |               |
|            | <b>Oxidizing properties</b>                               | Not available  |               |
|            | <b>Information with regard to physical hazard classes</b> |  |               |
|            | <b>Explosives</b>   | Not applicable due to physico-chemical characteristics |               |
|            | <b>Flammable gases</b>                                    | Not applicable due to physico-chemical characteristics |               |
|            | <b>Aerosols</b>   | Not applicable due to physico-chemical characteristics |               |
|            | <b>Oxidising gases</b>                                    | Not applicable due to physico-chemical characteristics |               |
|            | <b>Gases under pressure</b>                               | Not applicable due to physico-chemical characteristics |               |
|            | <b>Flammable liquids</b>                                  | Not applicable due to physico-chemical characteristics |               |
|            | <b>Flammable solids</b>                                   | Not applicable due to physico-chemical characteristics |               |

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|                   |  |   |
|-------------------|--|---|
|                   | <b>Self-reactive substances and mixtures</b>               | Not applicable due to physico-chemical characteristics                      |
|                   | <b>Substances and mixtures, which emit flammable gases</b> | Not applicable due to physico-chemical characteristics                      |
|                   | <b>Oxidising liquids</b>                                   | Not applicable due to physico-chemical characteristics                      |
|                   | <b>Oxidizing solids</b>                                    | Not applicable due to physico-chemical characteristics                      |
|                   | <b>Organic peroxides</b>                                   | Not applicable due to physico-chemical characteristics                      |
|                   | <b>Corrosive to metals</b>                                 | Not applicable due to physico-chemical characteristics                      |
|                   | <b>Desensitised explosives</b>                             | Not applicable due to physico-chemical characteristics                      |
|                   | <b>Other safety characteristics</b>                        |   |
|                   | <b>Mechanical sensitivity</b>                              | Not applicable due to physico-chemical characteristics                      |
|                   | <b>Self-accelerating polymerisation temperature</b>        | Not applicable due to physico-chemical characteristics                      |
|                   | <b>Formation of explosible dust/air mixtures</b>           | Not applicable due to physico-chemical characteristics                      |
|                   | <b>Acid/alkaline reserve</b>                               | Not applicable due to physico-chemical characteristics                      |
|                   | <b>Evaporation rate</b>                                    | Not applicable due to physico-chemical characteristics                      |
|                   | <b>Miscibility</b>   | Not applicable due to physico-chemical characteristics                      |
|                   | <b>Conductivity</b>  | Not applicable due to physico-chemical characteristics                      |
|                   | <b>Corrosiveness</b>                                       | Not applicable due to physico-chemical characteristics                      |
|                   | <b>Gas group</b>   | Not applicable due to physico-chemical characteristics                      |
|                   | <b>Redox potential</b>                                     | Not applicable due to physico-chemical characteristics                      |
|                   | <b>Radical formation potential</b>                         | Not applicable due to physico-chemical characteristics                      |
|                   | <b>Photocatalytic properties</b>                           | Not applicable due to physico-chemical characteristics                      |
| <b>SECTION 10</b> | <b>Stability and reactivity</b>                            |   |
| <b>10.1</b>       | <b>Reactivity</b>  | Stable under recommended storage conditions.                                |
| <b>10.2</b>       | <b>Chemical stability</b>                                  | Chemically stable under the indicated storage, handling and use conditions. |

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|             |   |  |
|-------------|---|--|
| <b>10.3</b> | <b>Possibility of hazardous reactions</b> | Exothermic reaction with:<br>metal chlorides, chlorites, chromates/perchromates, fluorine, nitrates, strong oxidising agents, hydrogen peroxide, Generates dangerous gases or fumes in contact with:<br>bases, chlorinated solvents Risk of explosion/exothermic reaction with:<br>ammonium nitrate, calcium hypochlorite, chlorine, chromium chloride, nitrous compounds, sodium hypochlorite, nitrous compounds, phosphorus pentachloride. |
| <b>10.4</b> | <b>Conditions to avoid</b>                | Avoid storage together with strong bases and/or strongly oxidizing or reducing substances.   |
| <b>10.5</b> | <b>Incompatible materials</b>             | Incompatible with oxidants and strong bases.   |
| <b>10.6</b> | <b>Hazardous decomposition products</b>   | Hazardous decomposition products formed under fire conditions. -<br>Oxides of carbon, Oxides of nitrogen (NOx)   |

### SECTION 11 Toxicological information

#### 11.1 Information on toxicological effects

##### Acute toxicity

| Component | CAS number | Method   | Species | Route      | Result   |
|-----------|------------|----------|---------|------------|--|
| Urea      | 57-13-6    | OECD 425 | Rat     | Oral       | DL50 > 2000 mg/kg bw.<br>CL50 > 5 mg/L air<br>DL50 > 5000 mg/kg bw |
|           |            | OECD 403 | Mouse   | Inhalation |  |
|           |            | OECD     | Rat     | Cutaneous  |  |

Based on available data, the classification criteria are not met.

##### Skin corrosion/irritation

| Component | CAS number | Method   | Species | Route     | Result       |
|-----------|------------|----------|---------|-----------|--------------|
| Urea      | 57-13-6    | OECD 404 | Rabbit  | Cutaneous | Non irritant |

Based on available data, the classification criteria are not met.

##### Serious eye damage/irritation

| Component | CAS number | Method        | Species | Route  | Result       |
|-----------|------------|---------------|---------|--------|--------------|
| Urea      | 57-13-6    | Not specified | Rabbit  | Ocular | Non irritant |

Based on available data, the classification criteria are not met.

##### Respiratory or skin sensitisation

| Component | CAS number | Method   | Species | Route     | Result           |
|-----------|------------|----------|---------|-----------|------------------|
| Urea      | 57-13-6    | OECD 429 | Mouse   | Cutaneous | Non sensitising. |

Based on available data, the classification criteria are not met.

##### Germ cell mutagenicity

| Component | CAS number | Method               | Species                           | Result        |
|-----------|------------|----------------------|-----------------------------------|---------------|
| Urea      | 57-13-6    | 471<br>Not specified | Bacteria<br>Cromosomal aberration | Non mutagenic |

Based on available data, the classification criteria are not met.

## Urea

| <b>Carcinogenicity</b>  |                                     |   |                |               |   |
|---|-------------------------------------|---|----------------|---------------|---|
| <b>Component</b>  | <b>CAS number</b>                   | <b>Method</b>   | <b>Species</b> | <b>Route</b>  | <b>Result</b>   |
| Urea  | 57-13-6                             | -   | -              | -             | There are no available studies. Study scientifically not necessary.   |
| Based on available data, the classification criteria are not met. |                                     |   |                |               |   |
| <b>Reproductive toxicity</b>                                      |                                     |   |                |               |   |
| <b>Component</b>  | <b>CAS number</b>                   | <b>Method</b>   | <b>Species</b> | <b>Route</b>  | <b>Result</b>   |
| Urea  | 57-13-6                             | OECD 422  | Rat            | Oral          | Data conclusive but not sufficient for classification.<br>-Effects on fertility :<br>NOAEL: 750 mg/kg bw/d.<br>-Toxicity for the development:<br>NOAEL: 750 mg/kg bw/d. |
| Based on available data, the classification criteria are not met. |                                     |   |                |               |   |
| <b>STOT- single exposure</b>                                      |                                     |   |                |               |   |
| <b>Component</b>  | <b>CAS number</b>                   | <b>Method</b>   | <b>Species</b> | <b>Route</b>  | <b>Result</b>   |
| Urea  | 57-13-6                             | Not available   | Not available  | Not available | Not available   |
| Based on available data, the classification criteria are not met. |                                     |   |                |               |   |
| <b>STOT-repeated exposure</b>                                     |                                     |   |                |               |   |
| <b>Component</b>  | <b>CAS number</b>                   | <b>Method</b>   | <b>Species</b> | <b>Route</b>  | <b>Result</b>   |
| Urea  | 57-13-6                             | OECD 422  | Rat            | Oral          | NOAEL: 250 mg/kg bw/d. The substance does not have to be classified as toxic by repeated exposure.  |
| Based on available data, the classification criteria are not met. |                                     |   |                |               |   |
| <b>Aspiration hazard</b>  |                                     |   |                |               |   |
| <b>Component</b>  | <b>CAS number</b>                   | <b>Result</b>   |                |               |   |
| Urea  | 57-13-6                             | No significant effects or critical hazards are known. |                |               |   |
| Based on available data, the classification criteria are not met. |                                     |   |                |               |   |
| <b>11.2</b>   | <b>Information on other hazards</b> |   |                |               |   |
| <b>Endocrine disruptive properties</b>                            |                                     |   |                |               |   |
| None of the components are listed.                                |                                     |   |                |               |   |
| <b>Other information</b>  |                                     |   |                |               |   |

## Urea

Not available

### SECTION 12 Ecological information

#### 12.1 Toxicity

##### Aquatic toxicity

| Component | N° CAS  |            | Fish                                | Crustacea   | Algae                     |
|-----------|---------|------------|-------------------------------------|---|---------------------------|
| Urea      | 57-13-6 | Short term | CL50 (96h):<br>6810 - 28000<br>mg/L | No scientifically<br>validated data are<br>available. | CE50 (24h) > 10000 mg/L   |
|           |         | Long term  | Not available                       | Not available   | NOEC/CE10 (192h): 47 mg/L |

##### Terrestrial toxicity

| Component | N° CAS  | Macro-<br>organism | Micro-<br>organism | Terrestrial plants                | Other organisms |
|-----------|---------|--------------------|--------------------|-----------------------------------|-----------------|
| Urea      | 57-13-6 | Not available      | Not available      | Low toxicity of urea<br>on plants | -               |

##### Microbiological activity in wastewater treatment plants

| Component | N° CAS  | Toxicity to aquatic micro-organisms  |
|-----------|---------|--|
| Urea      | 57-13-6 | The 72-hour toxicity limit of urea for Entosiphon sulcatumte is 29 mg/l. The 16-hour toxicity limit of urea for Pseudomonas putidawas is > 10000 mg/l. |

#### 12.2 Persistence and degradability

| Component | N° CAS  | Degradation           |  |
|-----------|---------|-----------------------|--|
| Urea      | 57-13-6 | <b>Hydrolysis</b>     | Hydrolysis is not seen. It is not necessary. |
|           |         | <b>Photolysis</b>     | Not necessary                                |
|           |         | <b>Biodegradation</b> | Not necessary                                |

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|                   |   |               |  |                                     |                     |
|-------------------|---|---------------|--|-------------------------------------|---------------------|
| <b>12.3</b>       | <b>Bioaccumulative potential</b>                                |               |  |                                     |                     |
|                   | <b>Component</b>  | <b>N° CAS</b> | <b>Octanol-water partition coefficient (Kow)</b>   | <b>Bioaccumulation factor (BFC)</b> | <b>Observations</b> |
|                   | Urea  | 57-13-6       | Not applicable.  | -                                   | -                   |
| <b>12.4</b>       | <b>Mobility in soil</b>   |               |  |                                     |                     |
|                   | <b>Component</b>  | <b>N° CAS</b> | <b>Result</b>  |                                     |                     |
|                   | Urea  | 57-13-6       | The adsorption of urea in soil increases as the concentration of added urea increases and the adsorption coefficients range from 0,037-0,064.  |                                     |                     |
| <b>12.5</b>       | <b>Results of PBT and vPvB assessment</b>                       |               |  |                                     |                     |
|                   | Not applicable.   |               |  |                                     |                     |
| <b>12.6</b>       | <b>Endocrine disrupting properties</b>                          |               |  |                                     |                     |
|                   | The product doesn't contain any endocrine disrupting substance. |               |  |                                     |                     |
| <b>12.7</b>       | <b>Other adverse effects</b>                                    |               |  |                                     |                     |
|                   | Significative effects or critcs risks are not known.            |               |  |                                     |                     |
| <b>SECTION 13</b> | <b>Disposal considerations</b>                                  |               |  |                                     |                     |
| <b>13.1</b>       | <b>Waste treatment methods</b>                                  |               |  |                                     |                     |
|                   | Methods of disposal   |               | <p>Waste management (disposal and recovery):<br/>Consult the authorised waste manager for recovery and disposal operations, in accordance with Annex 1 and Annex 2 (Directive 2018/851/EC).<br/>Packaging: According to codes 15 01 (Commission Decision 2014/955/EU), if the packaging has been in direct contact with the product, it should be treated in the same way as the product itself, otherwise it should be treated as non-hazardous waste. Discharge into waste water is not recommended. See section 6.2.<br/>Waste management provisions:<br/>In accordance with Annex II of Regulation (EC) No 1907/2006 (REACH), the Community or national provisions on waste management are presented.<br/>Community legislation: Directive 2018/851/EC, Commission Decision 2014/955/EU, Regulation (EU) no. 1357/2014 and the national legislation.</p> |                                     |                     |
|                   | Hazardous waste code  |               | Basing on its current knowledge, the supplier does not consider this product as a hazardous waste.   |                                     |                     |

## Urea

| SECTION 14 Transport information  |   |  |      |      |      |
|-----------------------------------|---|--|------|------|------|
|                                   | Regulatory information  | ADR/RID  | ADNR | IMDG | IATA |
| <b>14.1</b>                       | UN number   | -  |      |      |      |
| <b>14.2</b>                       | UN proper shipping name   | -  | -    |      |      |
| <b>14.3</b>                       | Transport hazard class(es)  |  |      |      |      |
|                                   | Class   | -  | -    |      |      |
|                                   | Label   | -  | -    |      |      |
| <b>14.4</b>                       | Packing group   | -  |      |      |      |
| <b>14.5</b>                       | Environmental hazards   | Product not classified as hazardous to the aquatic environment.                                  |      |      |      |
| <b>14.6</b>                       | Special precautions for user  | Not defined. See the relevant information, such as handling, in other sections of this document. |      |      |      |
| <b>14.7</b>                       | Maritime transport in bulk according to IMO instruments   | Not applicable.  |      |      |      |
| SECTION 15 Regulatory information |   |  |      |      |      |
| <b>15.1</b>                       | <b>Safety, health and environmental regulations/legislation specific for the substance or mixture</b>           |  |      |      |      |
|                                   | <b>Regulation (EC) No 1907/2006</b>   | This product complies with the REACH Regulation.   |      |      |      |
|                                   | <b>Named dangerous substances - ANNEX VI (CLP)</b>  | None substance listed.   |      |      |      |
|                                   | <b>SEVESO Category</b>  | Not applicable.  |      |      |      |
|                                   | <b>Qualifying quantity (tonnes) for the application of lower-tier requirements</b>                              | Not applicable.  |      |      |      |
|                                   | <b>Qualifying quantity (tonnes) for the application of upper-tier requirements</b>                              | Not applicable.  |      |      |      |
|                                   | <b>REGULATION (EU) 2019/1148</b>  |  |      |      |      |
|                                   | <b>Annex I - Restricted Explosives Precursors (Upper limit value for licensing purposes under Article 5(3))</b> | It doesn't contain the substance.  |      |      |      |
|                                   | <b>Annex II - Reportable Explosives Precursors</b>  | It doesn't contain the substance.  |      |      |      |
|                                   | <b>Regulation (EC) No 273/2004 on Drug Precursors</b>   | It doesn't contain the substance.  |      |      |      |
|                                   | <b>Regulation (EC) No. 2019/1009</b>  | This product complies with the Fertilizer's Regulation.  |      |      |      |



## Urea

|                                     |  |  |
|-------------------------------------|--|--|
|                                     | <b>Regulation (EC) No. 1272/2008 (CLP)</b>   | This product complies with the CLP Regulation.   |
|                                     | <b>Regulation (EC) No 1005/2009 on substances that deplete the ozone layer.</b>  | Not applicable.  |
|                                     | <b>Regulation (EC) No 649/2012 concerning the export and import of dangerous chemicals.</b>  | Not applicable.  |
|                                     | <b>Regulation (EC) No 111/2005 laying down rules for the monitoring of and trade in drug precursors between the Community and third countries.</b> | Not applicable.  |
|                                     | <b>Regulation (EC) No 1907/2006 - ANNEX XVII</b>   | Not applicable.  |
| <b>15.2</b>                         | <b>Chemical safety assessment</b>  |  |
|                                     | No chemical safety assessment has been performed for this substance because it is not a substance classified as hazardous.                         |  |
| <b>SECTION 16 Other information</b> |  |  |
|                                     | <b>Relevant phrases</b>  | Not applicable.  |
|                                     | <b>Abbreviations and acronyms</b>  | ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road).<br>STP: Sewage treatment plant.<br>OECD: Organisation for Economic Co-operation and Development.<br>NOAEL: No observed adverse effect level..<br>IMDG: International Maritime Code for Dangerous Goods.<br>IATA: International Air Transport Association.<br>GHS: Globally Harmonised System of Classification and Labelling of Chemicals.<br>CAS: Chemical Abstracts Service (division of the American Chemical Society).<br>DNEL: Derived No-Effect Level.<br>PNEC: Predicted No-Effect Concentration. |
|                                     | <b>Data compared to the previous version altered</b>   | Correction of errors in sections 13 and 15.  |

## Urea

|  |   |   |
|--|---|---|
|  | <p><b>References</b></p>  | <p>This safety data sheet has been prepared in accordance with:</p> <ul style="list-style-type: none"> <li>- ANNEX II: Guidance for the preparation of Safety Data Sheets of Regulation (EC) No 1907/2006 (Regulation (EU) 2020/878) based on the data included in the chemical safety report of registered substances.</li> <li>- Guidance available on the European Chemicals Agency (ECHA) website: (<a href="http://echa.europa.eu/">http://echa.europa.eu/</a>).</li> <li>- Guidance for the compilation of safety data sheets for fertilizer materials (<a href="http://www.fertilizerseurope.com">www.fertilizerseurope.com</a>).</li> </ul> |
|  | <p><b>Methods used for the classification of the mixture (Article 9 of Regulation (EC) No 1272/2008)</b></p>          | <p>Classification and Labeling in accordance with the principle of extrapolation of Regulation No. 1272/2008 (CLP).</p>   |
|  | <p><b>Advice on any training appropriate for workers to ensure protection of human health and the environment</b></p> | <p>Minimum training in the prevention of occupational hazards is recommended for personnel who will handle this product, in order to facilitate the understanding and interpretation of this safety data sheet, as well as the product label.</p>   |

The information contained in this safety data sheet is provided in good faith and its accuracy is based on knowledge of the product at the time of publication. The information presented is only intended to describe the product from the point of view of human and environmental protection and safety, and therefore cannot be regarded as product specifications. It does not imply acceptance of any commitment or legal responsibility on the part of the Company, for the consequences of its use or misuse in any circumstances. The information provided is considered accurate and current at the time of this edition, referring only to the product and may not be valid in compositions or formulations with other products. The responsibility for its use belongs to the users.