

# Product Safety Data Sheet

Conforms to REGULATION (EU) No. 453/2010



Group Number	6
Version	1.4
Issue Date	May-18
Last Updated	Jan-23

## Urea

<b>1.0 Identification of the substance/mixture and of the company/undertaking</b>	
<b>1.1 Product Identifier</b>	
Product/Trade name	Glasson Fertilisers straight Urea 46%N (Not inclusive of Feed Grade Urea).
Common chemical name	Urea fertilizer
Synonyms	Not applicable.
Chemical formula	Not applicable.
EU index number	Not applicable.
EC No	200-315-5
CAS No.	57-13-6
REACH Registration Number.	01-2119463277-33
National Product Registration Number, where applicable	Not applicable.
<b>1.2 Relevant identified uses of the substance or mixture and uses advised against</b>	
Use of the substance/mixture	Fertilizer
Uses advised against	The use of this substance should be limited to those specified in this SDS.
<b>1.3 Details of the supplier of the safety data sheet</b>	
Manufacturer/Importer/Supplier	<b>Glasson Fertilisers</b> West Quay, Glasson Dock Lancaster, LA2 0DB Tel: +44 (0) 1524 753600 <a href="mailto:fertilizers@glassongrain.co.uk">fertilizers@glassongrain.co.uk</a>
<b>1.4 Emergency telephone number</b>	+44 (0)1524 753600 (7:30am - 5:00pm)

<b>2 Hazards identification</b>	
<b>2.1 Classification of the substance or mixture</b>	
Classification in accordance with Regulation 1272/2008 (CLP)	Non-hazardous
Hazard Statement(s)	Not applicable
Classification in accordance with Directive 67/548 (DSD)	Not applicable
Risk phrase(s)	Not applicable
<b>2.2 Label elements</b>	
Hazard pictogram(s)	None
Signal word	Not applicable
Hazard Statement(s)	None
Precautionary statement(s)	None
<b>2.3 Other hazards</b>	
PBT/vPvB criteria	Ensure adequate ventilation, especially in confined areas. According to Annex XIII of Regulation (EC) No 1907/2006, no PBT and vPvB assessment has been conducted.

<b>Other hazards which do not result in classification</b>	
<b>Physical and chemical hazards</b>	Straight Urea fertilizers are non-hazardous, non-combustible and non-oxidising. However, the following points should be noted for fire and thermal decomposition products: Hazardous decomposition products formed under fire conditions; Carbon monoxide, (CO), Carbon dioxide, (CO <sub>2</sub> ), Nitrogen oxides, (NO <sub>x</sub> ), ammonia, nitrous gases.
<b>Health hazards</b>	The fertilizers are basically harmless products when handled correctly. However, prolonged or repeated contact with skin may cause discomfort, ingestion of large quantities may give rise to gastro-intestinal disorders and inhalation of dust at high concentrations may cause irritation of the nose; mucous membranes and upper respiratory tract with symptoms such as sore throat and coughing. Prolonged eye contact may cause some irritation. Persons who may have inhaled hazardous decomposition nitrous gases must 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 incident.
<b>Environmental hazards</b>	Heavy spillage of nitrate and phosphate may cause adverse environmental impact such as eutrophication in confined surface waters or nitrate contamination. See Section 12.

<b>3 Composition/information on ingredients</b>						
Mixture						
Chemical name	CAS no.	EC no.	Generic REACh Reg No.)	Classification Regulation (EC) No. 1272/2008	Classification Directive 67/548/EEC	% (w/w)
Urea	57-13-6	200-315-5	01-2119463277-33	-	-	Variable
EC no. means EINECS or ELINCS number.						
<i>This safety data sheet is not a guarantee of product specification or NPK value(s). NPK content is specified on sales orders, customer invoices, or product specifications.</i>						

<b>4.0 First aid measures</b>	
<b>4.1 Description of first aid measures</b>	
	<p><b>General</b> In some cases medical attention necessary (see below).</p> <p><b>Inhalation</b> Remove from source of exposure to dusts. Obtain medical attention if ill effects occur.</p> <p><b>Ingestion</b> Do not induce vomiting. Rinse mouth and then give water or milk to drink. Obtain medical attention if more than a small quantity has been swallowed.</p> <p><b>Skin contact</b> Wash the affected area with water.</p> <p><b>Eye contact</b> Flush/irrigate eyes with copious amounts of water for at least 15 minutes. Remove contact lenses if present and easy to do so. Obtain medical attention if symptoms persist.</p>
<b>4.2 Most important symptoms and effects, both acute and delayed</b>	
<b>Acute effects</b>	Symptoms include itching, burning, redness, and tearing of eyes.
<b>Delayed effects</b>	None known.
<b>4.3 Indication of any immediate medical attention and special treatment needed</b>	
<b>Note to physician</b>	Treat symptomatically. Contact poison centre specialist immediately if large quantities have been ingested or inhaled.

<b>5.0</b>	<b>Fire-fighting measures</b>	
<b>5.1</b>	<b>Extinguishing media</b>	
	<b>Suitable extinguishing media</b>	<b>If fertilizer is not directly involved in the fire</b> Use the best means available to extinguish the fire.. <b>If fertilizer is involved in the fire</b> The product is not flammable. Use plenty of water.
	<b>Unsuitable extinguishing media</b>	Do not use chemical extinguishers or foams or attempt to smother the fire with steam or sand.
<b>5.2</b>	<b>Special hazards arising from the substance or mixture</b>	
	<b>Specific hazards</b>	Where combustible material is the source of the fire, extinguish this source as a matter of priority. Do not allow molten fertilizers to run into drains. If fire run-off water enters any water course or drains, inform the appropriate water authority immediately
	<b>Hazardous thermal decomposition and combustion products</b>	Hazardous decomposition products formed under fire conditions; Carbon monoxide, (CO), Carbon dioxide, (CO <sub>2</sub> ), Nitrogen oxides, (NO <sub>x</sub> ), ammonia, nitrous gases. Persons who may have inhaled nitrous gases must 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 incident.
<b>5.3</b>	<b>Advice for firefighters</b>	
	<b>Special fire fighting procedures</b>	Open doors and windows of the store to give maximum ventilation. Avoid breathing the fumes (toxic); stand up-wind of the fire. Prevent any contamination of fertilizer by oils or other combustible materials.
	<b>Special protective equipment for fire-fighters</b>	Use a self-contained breathing apparatus if fumes are being entered.

<b>6.0</b>	<b>Accidental release measures</b>	
<b>6.1</b>	<b>Personal precautions, protective equipment and emergency procedures</b>	Avoid walking through spilled product and exposure to dust.
<b>6.2</b>	<b>Environmental precautions</b>	Take care to avoid the contamination of watercourses and drains and inform the appropriate authority in case of accidental contamination of watercourses.
<b>6.3</b>	<b>Methods and material for containment and cleaning up</b>	Any spillage of fertilizer should be cleaned up promptly, swept up and placed in a clean labelled open container for safe disposal, avoiding dusty conditions.
<b>6.4</b>	<b>Reference to other sections</b>	See section 1 for emergency contact information, section 8 for personal protective equipment and section 13 for waste disposal.

<b>7.0</b>	<b>Handling and storage</b>	
	The information in this section contains generic advice and guidance. The list of identified uses given in section 1 should be considered for any use-specific information provided in the Exposure Scenario(s).	
<b>7.1</b>	<b>Precautions for safe handling</b>	Avoid excessive generation of dust. Avoid contamination by combustible (e.g. diesel oil, grease, etc.) and/or other incompatible materials. Avoid unnecessary exposure to the atmosphere to prevent moisture pick-up. When handling the product over long periods use appropriate personal protective equipment, e.g. gloves. Carefully clean all equipment prior to maintenance and repair.
<b>7.2</b>	<b>Conditions for safe storage, including any incompatibilities</b>	Store in compliance with national and local regulations Locate away from the sources of heat or fire. Keep away from combustible materials and substances mentioned under Section 10. On farm, ensure that the fertilizer is not stored near hay, straw, grain, diesel oil, etc. When stored loose, take particular care to avoid mixing with other fertilizers. Ensure high standard of housekeeping in the storage area. Do not permit smoking and use of naked lights in the storage areas. Restrict stack size (according to local regulations) and keep at least 1m distance around the stacks of bagged products. Any building used for the storage should be dry and well ventilated. Where the nature of the bagged product and climatic conditions so require, store under conditions that will avoid product breakdown by thermal cycling (wide variation in temperature). The product should not be stored in direct sunlight to avoid physical breakdown due to thermal cycling.  Packaging materials: Plastic synthetic materials, steel and aluminum are suitable. Avoid use of copper and zinc.
<b>7.3</b>	<b>Specific end use(s)</b>	Fertiliser.

<b>8.0</b>	<b>Exposure controls/personal protection</b>	
	The information in this section contains generic advice and guidance. The list of identified uses given in section 1 should be considered for any use-specific information provided in the Exposure Scenario(s).	
<b>8.1</b>	<b>Control parameters</b>	

8.2	<b>Regulated Exposure limit values</b>	No specific EU official limit.												
	<b>Recommended occupational and consumer exposure limit values (following from the performed CSA):</b>	Exposure pattern Derived No Effect Level (DNEL)												
	<b>For Urea</b>	<table border="0"> <tr> <td></td> <td>Workers</td> <td>General Population</td> </tr> <tr> <td>Oral</td> <td>42 mg/kg bw/day</td> <td>42 mg/kg bw/day</td> </tr> <tr> <td>Dermal</td> <td>580 mg/kg bw/day</td> <td>580 mg/kg bw/day</td> </tr> <tr> <td>Inhalation</td> <td>292 mg/m<sup>3</sup></td> <td>125 mg/m<sup>3</sup></td> </tr> </table> <p>The long-term DNEL is considered sufficient to ensure that effects from acute exposure to the substance do not occur.</p>		Workers	General Population	Oral	42 mg/kg bw/day	42 mg/kg bw/day	Dermal	580 mg/kg bw/day	580 mg/kg bw/day	Inhalation	292 mg/m <sup>3</sup>	125 mg/m <sup>3</sup>
		Workers	General Population											
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	Dermal	580 mg/kg bw/day	580 mg/kg bw/day											
	Inhalation	292 mg/m <sup>3</sup>	125 mg/m <sup>3</sup>											
	<b>PNEC</b>	fresh water: 0.47 mg/l	marine water: 0.047 mg/l											
<b>For Urea</b>	Intermittent use/release: not given	Sewage treatment plant: not given												
<b>Exposure controls</b>														
<b>Appropriate engineering measures</b>	Avoid high dust concentration and provide ventilation where necessary.													
<b>Hygienic measures</b>	When handling the product do not eat, drink or smoke. Wash hands after handling and before eating, smoking and using the lavatory and at the end of the working period.													
<b>Individual protection</b>														
	<b>Respiratory system</b>	If dust concentration is high and/or ventilation is inadequate, use suitable dust mask or respirator with an appropriate filter (e.g. EN 143, 149, filters P1).												
	<b>Skin and body</b>	Working clothes.												
	<b>Hands</b>	Wear suitable gloves (e.g. plastic, rubber or leather) when handling the product over long periods.												
	<b>Eyes</b>	Use appropriate safety eye wear depending on the task being carried out.												
	<b>Environmental exposure controls</b>	Avoid the contamination of watercourses and drains and inform the appropriate authority in case of accidental contamination of watercourses. Do not flush into surface water or sanitary sewer system.												

<b>9.0</b>	<b>Physical and chemical properties</b>	
	<b>Appearance</b>	White granules or prills unless deliberately coloured during manufacture.
	<b>Odour</b>	Odourless.
	<b>Odour threshold</b>	Not applicable
	<b>pH</b>	Usually > 4.5
	<b>Melting point/freezing point</b>	160-170°C depending on moisture content, ammonium nitrate main component
	<b>Initial boiling point and boiling range</b>	Decomposes.
	<b>Flash point</b>	Not applicable, as the fertilizer is a mixture of inorganic solids
	<b>Flammability (solid, gas)</b>	Not flammable
	<b>Upper/lower flammability or explosive limits</b>	Not applicable
	<b>Explosive properties</b>	Product does not present an explosion hazard
	<b>Auto-ignition temperature</b>	Not determined
	<b>Decomposition temperature</b>	May start to decompose above approx. 170°C.
	<b>Minimum ignition energy</b>	Not applicable
	<b>Oxidising properties</b>	Not classified as an oxidizer
	<b>Critical temperature</b>	Not applicable
	<b>Relative density</b>	Not applicable
	<b>Density</b>	Normally 1.33g/cm <sup>3</sup> at 20°C
	<b>Loose bulk density</b>	Normally between 750-900 kg/m <sup>3</sup>
	<b>Vapour pressure at 20°C</b>	0.002kPa

<b>Vapour density</b>	Not applicable
<b>Partition coefficient (n-octanol/water)</b>	1.73 log POW at 20°C
<b>Viscosity</b>	Not applicable
<b>Mean particle size</b>	2-4mm approx.
<b>Water solubility</b>	Not applicable
<b>Surface tension</b>	Not surface active (based on molecular structure)
<b>Other information</b>	
	<b>Miscibility</b> Not applicable
	<b>Fat solubility</b> Not available
	<b>Gas group</b> Not applicable
	<b>Remarks</b> No further information available

<b>10.0</b>	<b>Stability and reactivity</b>	
<b>10.1</b>	<b>Reactivity</b>	Stable under recommended storage and handling conditions (see section 7, handling and storage).
<b>10.2</b>	<b>Chemical stability</b>	Stable under recommended storage and handling conditions (see section 7, handling and storage).
<b>10.3</b>	<b>Possibility of hazardous reactions</b>	When heated can decompose.
<b>10.4</b>	<b>Conditions to avoid</b>	Heating above 170°C (decomposes to gases). Contamination by incompatible materials. Unnecessary exposure to the atmosphere. Sources of heat or fire close to the product. Heating under confinement. Welding or hot work on equipment or plant which may have contained fertilizer without first washing thoroughly to remove all fertilizer.
<b>10.5</b>	<b>Incompatible materials</b>	Combustible materials, reducing agents, acids, alkalis, sulphur, chlorates, chromates, nitrites, permanganates, metallic powders and substances containing metals such as copper, nickel, cobalt, zinc and their alloys. Ammonium Nitrate and Ammonium Nitrate based fertilizers, strong oxidants, acids, nitrites and other nitrosing agents. Urea reacts with calcium hypochlorite or sodium hypochlorite to form the explosive nitrogen trichloride.
<b>10.6</b>	<b>Hazardous decomposition products</b>	For fire situation: see section 5. When strongly heated, it melts and decomposes releasing toxic fumes (e.g. NO <sub>x</sub> , ammonia and other gases depending on composition) When in contact with alkaline material such as lime, may give off ammonia gas. See also Sections 2 and 9.

<b>11.0</b>	<b>Toxicological information</b>	
<b>11.1</b>	<b>Information on toxicological effects</b>	
	<b>Toxicokinetics, metabolism and distribution</b>	Not available
	<b>Acute toxicity</b>	Ingredients
	<b>Acute oral toxicity</b>	Urea LD50: 14300 mg/kg rat, male
	<b>Local effects</b>	
	<b>Skin irritation</b>	Product No irritating effect
	<b>Eye irritation</b>	Product No irritating effect
	<b>Sensitisation</b>	No known significant effects or critical hazards to skin
	<b>Other</b>	
	<b>Sub-acute toxicity</b>	Oral 52-week LOAEL = 2250 mg/kg bw/day, (rat). Specific Target Organ Toxicity - Single exposure; No classification. 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. Inhalation; Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
	<b>Mutagenicity</b>	No known significant effects or critical hazards.
	<b>Reproductive toxicity</b>	No known significant effects or critical hazards.
	<b>Carcinogenicity</b>	No known significant effects or critical hazards.
	<b>Remarks</b>	Adverse health effects are considered unlikely when the product is handled and used correctly. If large quantities are ingested may give rise to gastro-intestinal disorders.

<b>12.0</b>	<b>Ecological information</b>		
<b>12.1</b>	<b>Toxicity</b>	Contains no substances known to be hazardous to the environment.	
		<b>Urea</b>	
<b>12.2</b>	<b>Persistence and degradability</b>	Fish	LC50: 6810mg/l, species Leuciscus Idis, (Orfe), 96 hour period.
		Daphnia magna	LC50; 10000 mg/l, species Daphnia Magna, (water flea), 48 hour period.
		Ingredient name	Urea
		<b>Biodegradation</b>	Standard test is not applicable as the mixture is inorganic.
<b>12.3</b>	<b>Bioaccumulative potential</b>	<b>Hydrolysis</b>	No hydrolysable group is present, will completely dissociate into ions.
		Octanol-water partition coefficient (Kow)	Not relevant as the mixture is inorganic, but considered to be low (based on high water solubility)
		Bioconcentration factor (BCF)	Low potential for bioaccumulation (based on main ingredient properties).
<b>12.4</b>	<b>Mobility in soil</b>	Urea; Soluble in water. Predicted to have a high mobility in soil. No further relevant information available.	
<b>12.5</b>	<b>Results of PBT and vPvB assessment</b>	Not applicable	
<b>12.6</b>	<b>Other adverse effects</b>	Heavy spillage may cause adverse environmental impact such as eutrophication in confined surface waters.	

13.0 Disposal considerations	
<b>Container</b>	Containers should be cleaned by appropriate method and then re-used or disposed by landfill or incineration as appropriate, in accordance with local and national regulations. Do not remove label until container is thoroughly cleaned.
<b>Methods of disposal</b>	Depending on degree and nature of contamination dispose of by use as fertilizer on farm, as raw material for liquid fertilizer, or to an authorised waste facility. Do not empty into drains; dispose of this material and its container in a safe way and in accordance with all applicable local and national regulations. See chapters 06 03 and 06 10 of the list of wastes (Commission decision 2000/532/EC )
<b>Package waste disposal</b>	Empty the bag by shaking to remove as much as possible of its contents. If approved by local authorities, empty bags may be disposed of as non-hazardous material or returned for recycling.
<i>Note: see section 7 for safe handling and storage</i>	

14.0 Transport information						
		ADR/RID	ADN/ADNR	IMDG	ICAO/IATA	
14.1	<b>UN Number</b>	Not classified	Not classified	Not classified	Not classified	
14.2	<b>UN Proper shipping name</b>	Not applicable	Not applicable	Not applicable	Not applicable	
14.3	<b>Transport hazard class(es)</b>	Not classified	Not classified	Not classified	Not classified	
14.4	<b>Packing group</b>	Not applicable	Not applicable	Not applicable	Not applicable	
	<b>Label</b>	Not applicable	Not applicable	Not applicable	Not applicable	
14.5	<b>Environmental hazards</b>	Not applicable.				
14.6	<b>Special precautions for user</b>	None.				
14.7	<b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.				

15.0 Regulatory information		
15.1	<b>Safety, health and environmental regulation/legislation specific for the substance or mixture</b>	None applicable
	<b>Other regulations</b>	Regulation EC 1907/2006 (REACH), EC 2003/2003, 96/82 EC. Decision No 1348/2008/EC of the European Parliament & of the Council and Commission Regulation (EC) No 552/2009.
15.2	<b>Chemical safety assessment</b>	In accordance with REACH Article 14, a Chemical Safety Assessment has been carried out for the main ingredient Urea as a substance.

16.0 Other information	
The information provided in this safety data sheet is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any proceed, unless specified in the text.	
<b>Classification in accordance with Regulation 1272/2008, as listed in Annex VI:</b>	None.
<b>Classification in accordance with Regulation 1272/2008, by self-classification based on the performed CSA</b>	Not classified.
<b>Risk phrases</b>	None.
<b>Symbols</b>	None.
<b>Abbreviations and acronyms</b>	
<b>Training advice</b>	
<b>Date of previous SDS</b>	September 2014
<b>Modifications in this version</b>	None.

**Disclaimer**

The information in this Safety Data Sheet is given in good faith and belief in its accuracy based on our knowledge of the substance/preparation concerned at the date of publication. It does not imply the acceptance of any legal liability or responsibility whatsoever by Glasson Fertilizers for the consequences of its use or misuse in any particular circumstances.

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