



# SAFETY DATA SHEET

Revision date 13/01/2017  
Date of the previous version 23/12/2011

Version 2  
EN

## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1 Product identifier

Product Name **Urean/UAN**

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

Recommended Use Fertilisers, Industrial application, Professional use.  
Uses advised against All other uses.

### 1.3 Details of the supplier of the safety data sheet

OCI Nitrogen BV  
Mijnweg 1  
P.O. Box 601  
6160 AP Geleen, The Netherlands  
Tel: +31 (0) 46 7020111  
www.ocinitrogen.com

info.agro@ocinitrogen.com

### 1.4 Emergency telephone number

UK National Health Service (NHS) call 111 or, in life-threatening emergencies, call 999

WAL National Health Service (NHS) call 0845 46 47

IE National Poisons Information Centre  
+353 1 809 2566 or +353 1 837 9964 (only for healthcare professionals)

Manufacturer: Alert & Care Centre Chemelot (Geleen, The Netherlands)  
+31 46 4765555 (24/7)

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

Classification (1272/2008/EC)  
Not classified

### 2.2 Label elements

None

### 2.3 Other hazards

None known

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.2 Mixtures

Chemical name	EC-No	CAS-No	Weight %	Classification (1272/2008/EC)	REACH registration number
Urea	200-315-5	57-13-6	30-32	-	01-2119463277-33
Ammonium sulfate	231-984-1	7783-20-2	0-3	-	01-2119455044-46
Ammonium nitrate	229-347-8	6484-52-2	37-43	Oxid. Solid 3 H272 Eye Irrit. 2 H319 80 % < C ≤ 100 %	01-2119490981-27

For the full text of the H-Statements mentioned in this section, see Section 16.

## SECTION 4: FIRST AID MEASURES

### 4.1 Description of first aid measures

<b>General Advice</b>	When symptoms persist or in all cases of doubt seek medical advice.
<b>Eye Contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention immediately if symptoms occur.
<b>Skin Contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention immediately if symptoms occur.
<b>Ingestion</b>	Rinse mouth. Drink 1 or 2 glasses of water. Do not induce vomiting without medical advice. Get medical attention immediately if symptoms occur.
<b>Inhalation</b>	Remove to fresh air and keep at rest in a position comfortable for breathing. Get medical attention immediately if symptoms occur.
<b>Protection of first-aiders</b>	Use personal protective equipment. Avoid contact with skin, eyes and clothing.

### 4.2 Most important symptoms and effects, both acute and delayed

<b>Main symptoms</b>	No acute and delayed symptoms and effects are observed. Inhalation of mist causes irritation of respiratory system. Under fire conditions, Effects of contact or inhalation may be delayed.
----------------------	---

### 4.3 Indication of any immediate medical attention and special treatment needed

<b>Notes to physician</b>	Treat symptomatically. Hazardous decomposition products formed under fire conditions. Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed.
---------------------------	--

## SECTION 5: FIREFIGHTING MEASURES

### 5.1 Extinguishing media

**Suitable Extinguishing Media** Use extinguishing agent suitable for type of surrounding fire: Water, Dry sand.

**Unsuitable Extinguishing Media** None known.

### 5.2 Special hazards arising from the substance or mixture

**Special Hazard** Heating of containers may cause pressure rise, with risk of bursting. The product is not an oxidizer at manufactured concentration. The product may become an oxidizing liquid if concentrated by evaporation. Hazardous decomposition products formed under fire conditions Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Nitrogen oxides (NO<sub>x</sub>), Sulphur oxides, Ammonia. Amines.

### 5.3 Advice for firefighters

**Special protective equipment for fire-fighters** Wear self-contained breathing apparatus and protective suit.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Do not touch or walk through spilled material. Avoid contact with skin, eyes and clothing. Avoid breathing vapours or mists. Use personal protective equipment.

### 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Prevent entry into waterways, sewers, basements or confined areas.

### 6.3 Methods and material for containment and cleaning up

Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. After cleaning, flush away traces with water. Dispose of contents/container in accordance with local regulations.

### 6.4 Reference to other sections

See sections 8 and 13.

## SECTION 7: HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. Avoid breathing vapours or mists. Do not breathe dust. Wear personal protective equipment. Wash thoroughly after handling. Do not eat, drink or smoke when using this product.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labelled containers. Keep away from direct sunlight Keep away from heat and sources of ignition, Incompatible Materials ( Reducing agents, Strong acids, Alkalis, Zinc, Copper or copper containing metals, Chromates ).  
Packaging: stainless steel, Carbon steel, Other: compatible materials.

### 7.3 Specific end use(s)

**Exposure scenario** Not available.

**Other information** Not available.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

**Exposure Limits** Contains no substances with occupational exposure limit values.

**Recommended monitoring procedures** No information available.

### Derived No Effect Level (DNEL)

Chemical name	Long-term exposure - Systemic effects - Inhalation	Long-term exposure - Systemic effects - Dermal	Acute / short-term exposure - Systemic effects - Inhalation	Acute / short-term exposure - Systemic effects - Dermal
Urea	292 mg/m <sup>3</sup>	580 mg/kg bw/d		
Ammonium nitrate	36 mg/m <sup>3</sup>	5.12 mg/kg bw/day		
Ammonium sulfate	11.167 mg/m <sup>3</sup>	42.667 mg/kg bw/d		

### Predicted No Effect Concentration (PNEC)

Chemical name	Freshwater	Marine water	Intermittent release	Sewage treatment plant	Freshwater sediment	Marine sediment	Soil	Oral
Urea	0.47 mg/L							
Ammonium nitrate				18 mg/L				
Ammonium sulfate	0.312 mg/L	0.0312 mg/L	0.53 mg/L	16.18 mg/L	0.063 mg/kg dw		62.6 mg/kg dw	

### 8.2 Exposure controls

**Appropriate Engineering Controls** Ensure adequate ventilation, especially in confined areas.

#### Individual protection measures, such as personal protective equipment

**Eye Protection**

**Hand Protection**

**Skin and body protection**

**Respiratory Protection**

**Recommended Filter Type**

Safety glasses with side-shields. If splashes are likely to occur, wear Face-shield.  
 Impervious gloves, chemical resistant: Break through time: >8h : Natural Rubber (0,5mm), Polychloropyrene (CR) (0,5mm), Nitrile rubber (0,35mm), Butyl rubber (0,5mm), Polyvinylchloride (0,5mm).  
 Wear suitable protective clothing. Long sleeved clothing.  
 When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.  
 FFP2 / APEC P2

**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice.

**Environmental exposure controls** Try to prevent the material from entering drains or water courses. Avoid unintended discharge to soil.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Physical state @20°C	Liquid
Appearance	No information available
Colour	Colourless
Odour	Odourless
pH	6.4-7.2
Melting/freezing point	No information available
Boiling point/boiling range	>100 °C
Flash point	No information available
Evaporation rate	No information available
Flammability (solid, gas)	Not flammable
Flammability Limits in Air	Not flammable
Vapour pressure	No information available
Vapour density	No information available
Relative density	No information available
Solubility	
Water solubility	Soluble
Partition coefficient (n-octanol/water)	No information available
Autoignition temperature	No information available
Decomposition temperature	>290 °C
Viscosity, dynamic	No information available
Explosive properties	No information available
Oxidising properties	None

### 9.2 Other information

Density	1.3 g/cm <sup>3</sup>
Crystallisation point:	-7 °C

## SECTION 10: STABILITY AND REACTIVITY

### 10.1 Reactivity

No information available.

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

Hazardous polymerisation does not occur.

### 10.4 Conditions to avoid

Heat, flames and sparks. Formation of urea nitrate may occur in contact with free nitric acid.

### 10.5 Incompatible materials

Reducing agents, Strong acids, Strong alkalis, Combustible materials, Powdered Metals. Chromates. Zinc. Copper or copper containing metals. Chlorates.

### 10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions: Carbon oxides, Nitrogen oxides (NO<sub>x</sub>), Ammonia.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Acute Toxicity

<b>Ingestion</b>	No known effect.
<b>Skin Contact</b>	No known effect.
<b>Inhalation</b>	No known effect.

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Ammonium nitrate	2950 mg/kg (Rat, OECD 401)	> 5000 mg/kg (Rat, OECD 402)	>88.8 mg/L (Rat, 4h)
Ammonium sulfate	4250 mg/kg ( Rat, OECD 401 )	>2000 mg/kg ( Rat, OECD 434 )	

**Skin Corrosion/Irritation** No known effect.

**Serious eye damage/irritation** No known effect.

**Respiratory or skin sensitisation** No known effect.

**Germ Cell Mutagenicity** Not known to cause heritable genetic damage.

**Carcinogenicity** Contains no ingredient listed as a carcinogen.

**Reproductive Toxicity** Not known to cause birth defects or have a deleterious effect on a developing fetus. Not known to adversely affect reproductive functions and organs.

**STOT-single exposure** No known effect.

**STOT-repeated exposure** No known effect

**Aspiration Hazard** No known effect.

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1 Toxicity

Chemical name	Toxicity to Algae	Toxicity to Fish	Toxicity to Micro-organisms	Toxicity to daphnia and other aquatic invertebrates
Urea		LC50: 10000 mg/l, Leuciscus idus melanotus , 48h		EC50: >10000 mg/l, Daphnia magna, 24 h
Ammonium nitrate	EC50: >1700 mg/L, benthic diatoms, 10d	LC50: 447 mg/L, Cyprinus carpio L, 48h	EC50: >1000 mg/L, 3h	EC50: 490 mg/L, (300 mg NO <sub>3</sub> /L), Daphnia Magna, 48h
Ammonium sulfate	EC50: 1605 mg/L, Chlorella vulgaris, 5d	LC50: 53 mg/L, Oncorhynchus mykiss, 96h EC10: 5.29 mg/L, Lepomis macrochirus, 30d		EC50: 121.7 mg/L, Ceriodaphnia acanthine, 48h EC10: 3.12 mg/L, Hyalella Azteca, 10w

### 12.2 Persistence and degradability

No information available.

### 12.3 Bioaccumulative potential

Not applicable.

Chemical name	Log P <sub>ow</sub>	Bioconcentration factor (BCF)
Urea	< 3	
Ammonium nitrate	-3.1	
Ammonium sulfate	-5.1	

### 12.4 Mobility in soil

No information available.

### 12.5 Results of PBT and vPvB assessment

No information available.

### 12.6 Other adverse effects

No information available.

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

#### **Waste from residues / unused products**

Dispose of in accordance with local regulations.

#### **Contaminated Packaging**

Empty containers should be taken to an approved waste handling site for recycling or disposal.

**SECTION 14: TRANSPORT INFORMATION****14.1 UN number**

Not regulated.

**14.2 UN proper shipping name**

Not regulated.

**14.3 Transport hazard class(es)**

Not regulated.

**14.4 Packing group**

Not regulated.

**14.5 Environmental hazards**

Not applicable.

**14.6 Special precautions for user**

Not applicable.

**14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code**

Not applicable.

**SECTION 15: REGULATORY INFORMATION****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****Restrictions on use**

REACH (1907/2006), Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles Applicable Table 58

**Other Regulations**

REGULATION (EC) No 2003/2003 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 13 October 2003 - relating to fertilisers.

**15.2 Chemical safety assessment**

Not available.



**SECTION 16: OTHER INFORMATION****Full text of H-Statements referred to under sections 2 and 3**

H272 - May intensify fire; oxidiser

H319 - Causes serious eye irritation

**Abbreviations and acronyms**

EC: European Commission

REACH: Registration, Evaluation, Authorisation and Restriction of Chemical substances

STOT: Specific Target Organ Toxicity

PBT: Persistent, Bioaccumulative, Toxic

vPvB: very Persistent and very Bioaccumulating

ADR: Accord européen relatif au transport international des marchandises Dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement concernant le transport international ferroviaire des marchandises dangereuses (Regulations for the International Transport of Dangerous Goods by Rail)

ADN: Accord européen relatif au transport international des marchandises Dangereuses par voies de Navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)

IMDG: International Maritime Dangerous Goods Code

ICAO: International Civil Aviation Organization

**Revision note**

Emergency Telephone, Composition/information on ingredients, First aid measures, Fire fighting measures, REGULATORY INFORMATION.

**Training Advice**

Workers must be trained in the proper use and handling of this product as required under applicable regulations.

**Further information**

Product classification based on report "Assessment of ammonium nitrate as eye irritant for classification purposes" (Fertilizers Europe, 14 July 2011).

**SDS No.**

OC00018

**Disclaimer**

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 a 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 process, unless specified in the text