

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

## Urea Ammonium Nitrate solution

Version 3.0

Revision Date: 18.05.2017

Print Date 28.11.2018

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

#### 1.1 Product identifier

Trade name : UAN 30 N

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

Use of the Substance/Mixture : Fertilizers, Adhesives and/or sealants, Intermediate, Water treatment chemical

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

Supplier : Borealis L.A.T GmbH  
St.-Peter-Strasse 25, 4021 Linz, Austria  
Telephone: +43 732 6915-0

E-mail address : [sds@borealisgroup.com](mailto:sds@borealisgroup.com)

#### 1.4 Emergency telephone number

+44 (0) 1235 239 670 (24h)

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### Classification (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

#### 2.2 Label elements

##### Labelling (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

##### Additional Labelling:

EUH210 Safety data sheet available on request.

#### 2.3 Other hazards

PBT and vPvB assessment:  
Not applicable  
(inorganic)

Results of PBT and vPvB assessment : Not applicable (inorganic)

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### SECTION 3: Composition/information on ingredients

These products comply with European regulation 2003/2003 "EC FERTILISER"

#### 3.2 Mixtures

##### Hazardous components

Chemical name	CAS-No. EC-No. Registration number	Classification (REGULATION (EC) No 1272/2008)	Concentration (% w/w)
Ammonium nitrate	6484-52-2 229-347-8  01-2119490981-27	Ox. Sol. 3; H272 Eye Irrit. 2; H319	> 40 - < 45

Remarks : Mixtures containing less than 80% ammonium nitrate are not classified as irritating to eyes (OECD 405 and OECD 437 studies done on similar mixtures).

REACH Registration Numbers:  
www.borealisgroup.com , Company - REACH - Registered substances

For explanation of abbreviations see section 16.

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

General advice : Move the victim to fresh air.

If inhaled : Remove to fresh air.  
If not breathing, give artificial respiration.  
If breathing is difficult, give oxygen.  
Get medical attention if symptoms occur.  
No mouth-to-mouth respiration.

In case of skin contact : Take off contaminated clothing and shoes immediately.  
Wash off with soap and plenty of water.

In case of eye contact : Rinse thoroughly with plenty of water, also under the eyelids.  
If easy to do, remove contact lens, if worn.

If swallowed : Obtain medical attention.  
Clean mouth with water and drink afterwards plenty of water.  
Never give anything by mouth to an unconscious person.

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### II

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

Symptoms	: Eye contact: Redness
	Ingestion: Abdominal pain Convulsions Diarrhoea Dizziness Vomiting Weakness
	Skin contact: Redness
	Inhalation: Cough Headache Sore throat

The absorption of this product into the body may lead to the formation of methaemoglobine that, in sufficient concentration, causes cyanosis.

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

Treatment	: Immediately give oxygen if victim turns blue (lips, ears, fingernails). Symptoms of poisoning may not appear for several hours. Keep under medical supervision for at least 48 hours.
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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media	: High volume water jet
Unsuitable extinguishing media	: None known.

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

Specific hazards during firefighting	: Burning produces noxious and toxic fumes. Hazardous decomposition products due to incomplete combustion Nitrogen oxides (NOx) Ammonia
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Potential explosion hazard when heated under strong confinement (e.g. tubes and drains) especially if contaminated with incompatible material.  
See chapter 10.

### 5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus. Complete suit protecting against chemicals

Further information : Prevent fire extinguishing water from contaminating surface water or the ground water system.  
Contact the proper local authorities.

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## SECTION 6: Accidental release measures

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

Use personal protective equipment.  
Avoid breathing vapours, mist or gas.  
Avoid contact with skin, eyes and clothing.  
Eliminate all ignition sources if safe to do so.

### 6.2 Environmental precautions

Do not flush into surface water or sanitary sewer system.  
If the product contaminates rivers and lakes or drains inform respective authorities.

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

Soak up with inert absorbent material.  
Allow to solidify, use mechanical handling equipment.  
Scrape up.  
Shovel into suitable container for disposal.  
After cleaning, flush away traces with water.

### 6.4 Reference to other sections

For personal protection see section 8., For disposal considerations see section 13.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Advice on safe handling : Ensure adequate ventilation.  
Use with local exhaust ventilation.  
Avoid inhalation of vapour or mist.  
The pump should be rinsed with water before each start-up due to safety reasons.

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	Rinse the pump with water also after shutdown to avoid formation of solid residues.
	Drain down and flush system prior to equipment opening or maintenance.
Advice on protection against fire and explosion	: Keep away from open flames, hot surfaces and sources of ignition. Keep away from combustible material. Keep away from heat. Risk of explosion if heated under confinement.
Hygiene measures	: Handle in accordance with good industrial hygiene and safety practice. Regular cleaning of equipment, work area and clothing. When using do not eat, drink or smoke. Keep away from food, drink and animal feedingstuffs. Wash hands before breaks and immediately after handling the product.

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

Requirements for storage areas and containers	: Suitable materials for containers: Stainless steel Plastics Keep away from sources of ignition - No smoking.
Further information on storage conditions	: Keep in a dry place. Storage temperature: -10 - 35°C
Advice on common storage	: Keep away from combustible material. Keep away from incompatible materials. See chapter 10.

### 7.3 Specific end use(s)

Specific use(s)	: Consult the technical guidelines for the use of this substance/mixture.
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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Contains no substances with occupational exposure limit values.

### 8.2 Exposure controls

#### Engineering measures

Avoid inhalation of vapour or mist.

Provide adequate ventilation.

Avoid splashing.

Use specific dispensers and pumps specifically designed to prevent splashes/spills/exposure to occur.

|| Avoidance of contact with contaminated tools and objects.

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### Personal protective equipment

- Eye protection : Tightly fitting safety goggles
- Hand protection
- Material : Nitrile rubber
- Break through time : > 480 min
- Material : Viton (R)
- Break through time : > 480 min
- Material : butyl-rubber
- Break through time : > 480 min
- Skin and body protection : Wear suitable protective clothing.  
Chemical resistant protective suit  
Apron  
Boots
- Respiratory protection : Suitable respiratory equipment:  
(K or ABEK-filter)  
Respiratory protection complying with EN 143 / EN 149.  
In case of insufficient ventilation: Self-contained breathing apparatus.

### Environmental exposure controls

- General advice : Do not flush into surface water or sanitary sewer system. If the product contaminates rivers and lakes or drains inform respective authorities.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

- Appearance : liquid
- Colour : colourless, light yellow
- Odour : ammoniacal
- Odour Threshold : No data available
- pH : 6 - 8
- Melting point : -9 °C
- Boiling point : No data available

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Flash point	: No data available
Evaporation rate	: No data available
Flammability (solid, gas)	: not auto-flammable
Upper explosion limit	: No data available
Lower explosion limit	: No data available
Vapour pressure	: No data available
Relative density	: No data available
Density	: 1.300 kg/m <sup>3</sup>
Bulk density	: No data available
Solubility(ies)	
Water solubility	: completely miscible
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: not auto-flammable
Decomposition temperature	: 210 °C
Viscosity	
Viscosity, dynamic	: 3 - 10 mPa.s
Explosive properties	: Not explosive
Oxidizing properties	: The substance or mixture is not classified as oxidizing.

### 9.2 Other information

No data available

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Stable under recommended storage conditions.

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### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

Hazardous reactions : Contact with strong bases liberates ammonia.  
Contact with strong acids liberates nitrous gases.  
May react violently with:  
Combustible material

### 10.4 Conditions to avoid

Conditions to avoid : Decomposes on heating.  
Risk of explosion if heated under confinement.

### 10.5 Incompatible materials

Materials to avoid : Reducing agents  
Strong acids and strong bases  
Powdered metals  
Combustible material  
Copper  
Copper alloys  
Chlorates  
Chromates  
Nitrites  
sulphur  
permanganates

### 10.6 Hazardous decomposition products

Under fire conditions:, Nitrogen oxides (NOx), Ammonia

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Not classified based on available information.

#### Components:

##### Ammonium nitrate:

Acute oral toxicity : LD50 (Rat): 2.950 mg/kg  
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50: > 88,8 mg/l  
Method: No information available.

Acute dermal toxicity : LD50: > 5.000 mg/kg



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Method: OECD Test Guideline 402

### **Skin corrosion/irritation**

Not classified based on available information.

#### **Product:**

No skin irritation

Effects of repeated or prolonged skin contacts may include:

Discomfort

#### **Components:**

##### **Ammonium nitrate:**

Species: Rabbit

Method: OECD Test Guideline 404

Result: No skin irritation

### **Serious eye damage/eye irritation**

Not classified based on available information.

#### **Product:**

Assessment: No eye irritation

Method: OECD Test Guideline 405 & 437

Information given is based on tests on mixtures with similar compositions.

#### **Components:**

##### **Ammonium nitrate:**

Species: Rabbit

Method: OECD Test Guideline 405

Result: Irritating to eyes.

### **Respiratory or skin sensitisation**

Skin sensitisation: Not classified based on available information.

Respiratory sensitisation: Not classified based on available information.

#### **Product:**

Assessment: Does not cause skin sensitisation.

#### **Components:**

##### **Ammonium nitrate:**

Species: Mouse

Method: OECD Test Guideline 429

Result: Does not cause skin sensitisation.

Test substance: Calcium ammonium nitrate

Read-across (Analogy)

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### Germ cell mutagenicity

Not classified based on available information.

#### Components:

##### **Ammonium nitrate:**

Genotoxicity in vitro

- : Test Type: Ames test  
Method: OECD Test Guideline 471  
Result: negative  
Test substance: Ammonium calcium nitrate
- : Test Type: Chromosome aberration test in vitro  
Method: OECD Test Guideline 473  
Result: negative  
Test substance: Ammonium calcium nitrate
- : Test Type: In vitro gene mutation study in mammalian cells  
Method: OECD Test Guideline 476  
Result: negative  
Test substance: Potassium nitrate

### Carcinogenicity

Not classified based on available information.

#### Components:

##### **Ammonium nitrate:**

Remarks: No significant adverse effects were reported

### Reproductive toxicity

Not classified based on available information.

#### Components:

##### **Ammonium nitrate:**

Effects on fertility

- : Species: Rat  
NOAEL: > 1.500 mg/kg,  
Method: OECD Test Guideline 422  
Test substance: Potassium nitrate

### STOT - single exposure

Not classified based on available information.

#### Components:

##### **Ammonium nitrate:**

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

### STOT - repeated exposure

Not classified based on available information.

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### Components:

#### **Ammonium nitrate:**

Species: Rat  
NOAEL: 256 mg/kg  
Application Route: Oral  
Exposure time: 364 d  
Method: OECD Test Guideline 453  
Test substance: Ammonium sulphate

Species: Rat  
NOAEL: 0,185 mg/l  
Application Route: Inhalation  
Exposure time: 14 d  
Method: OECD Test Guideline 412  
Test substance: Ammonium nitrate

#### **Aspiration toxicity**

Not classified based on available information.

### Components:

#### **Ammonium nitrate:**

No data available

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## SECTION 12: Ecological information

### 12.1 Toxicity

#### Components:

##### **Ammonium nitrate:**

Toxicity to fish	: LC50 (Cyprinus carpio (Carp)): 447 mg/l Exposure time: 48 h Test Type: Short term
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): 490 mg/l Exposure time: 48 h Test Type: Short term Test substance: Potassium nitrate Remarks: Fresh water
Toxicity to algae	: EC50 : > 1.700 mg/l Exposure time: 10 d Test substance: Potassium nitrate Remarks: Marine water
Toxicity to bacteria	: EC50 : > 1.000 mg/l Exposure time: 180 min

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Test Type: Respiration inhibition of activated sludge  
Test substance: Sodium nitrate  
Method: OECD Test Guideline 209

Toxicity to fish (Chronic toxicity) : Remarks: study scientifically unjustified

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EC50: 555 mg/l  
Exposure time: 7 d  
Species: Bullia digitalis (prosobranch gastropod)

### 12.2 Persistence and degradability

#### Product:

Biodegradability : Remarks: The methods for determining biodegradability are not applicable to inorganic substances.

#### Components:

##### **Ammonium nitrate:**

Biodegradability : Remarks: The methods for determining biodegradability are not applicable to inorganic substances.

### 12.3 Bioaccumulative potential

#### Product:

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

#### Components:

##### **Ammonium nitrate:**

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

### 12.4 Mobility in soil

#### Components:

##### **Ammonium nitrate:**

Mobility : Medium: Water  
Remarks: completely soluble

: Medium: Soil  
Remarks: (NO<sub>3</sub>-), Not expected to adsorb on soil.

: Medium: Soil  
Remarks: (NH<sub>4</sub>+), After release, adsorbs onto soil.

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### 12.5 Results of PBT and vPvB assessment

**Product:**

Assessment : Not applicable. (inorganic).

### 12.6 Other adverse effects

**Product:**

Additional ecological information : Remarks: Do not allow product to reach ground water, water bodies or sewage system.  
Heavy spillage may cause adverse environmental impact such as eutrophication in confined surface waters.

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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Product : Can be landfilled or incinerated, when in compliance with local regulations.  
Depending on the degree of contamination, dispose of by use as fertilizer on farm or as raw material for an authorised waste facility.  
Do not allow product to reach ground water, water bodies or sewage system.  
Do not dispose of together with household waste.  
European waste code:  
06 10 99: wastes not otherwise specified

Contaminated packaging : In accordance with local and national regulations.

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## SECTION 14: Transport information

### 14.1 UN number

Not regulated as a dangerous good

### 14.2 UN proper shipping name

Not regulated as a dangerous good

### 14.3 Transport hazard class(es)

Not regulated as a dangerous good

### 14.4 Packing group

Not regulated as a dangerous good

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### 14.5 Environmental hazards

Not regulated as a dangerous good

### 14.6 Special precautions for user

Remarks : No specific instructions needed.

### 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Ship type : 3  
Pollution category : Z

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

|| Not applicable

Other regulations : Regulation (EC) No 2003/2003 relating to fertilizers

Regulation (EU) No 98/2013 of the European Parliament and of the Council of 15 January 2013 on the marketing and use of explosives precursors:  
Annex II

### 15.2 Chemical safety assessment

Chemical Safety Assessments have been carried out for these substances.

(Ammonium nitrate)

(Urea)

## SECTION 16: Other information

### Full text of H-Statements

H272 : May intensify fire; oxidizer.  
H319 : Causes serious eye irritation.

### Full text of other abbreviations

Eye Irrit. : Eye irritation  
Ox. Sol. : Oxidizing solids

### Further information

Training advice : Provide adequate information, instruction and training for operators.

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- Other information : Changes since the last version are highlighted in the margin.  
This version replaces all previous versions.
- Issuer : Borealis, Group Product Stewardship / Mikaela Eriksson.
- Sources of key data used to compile the Safety Data Sheet : Chemical Safety Report, Ammonium Nitrate. FARM REACH Consortium, 2015  
International Chemical Safety Card, Urea, 1997  
([http://www.ilo.org/dyn/icsc/showcard.display?p\\_lang=en&p\\_card\\_id=0595](http://www.ilo.org/dyn/icsc/showcard.display?p_lang=en&p_card_id=0595))  
Chemical Safety Report, Urea. FARM REACH Consortium, 2017  
EFMA / Fertilizers Europe Guidance documents

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