



According to REACH Regulation (EC) No 1907/2006, as retained and amended by SI 2019/758 and SI 2020/1577

## SAFETY DATA SHEET

# GROUP 4 - AMMONIUM NITRATE BASED COMPOUND OR BLENDS – NPK, NP, NK, CONTAINING <70% AMMONIUM NITRATE

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

#### 1.1. Product identifier

*Trade name:*

GROUP 4 - AMMONIUM NITRATE BASED COMPOUND OR BLENDS – NPK, NP, NK, CONTAINING <70% AMMONIUM NITRATE

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

*Relevant identified uses of the substance or mixture:* Fertiliser  
Restricted to professional users.

*Uses advised against:* None known.

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

*Company and address:*

**Origin Soil Nutrition**  
1-3 Freeman Court, Jarman Way  
SG8 5HW Royston  
United Kingdom  
01763 255500  
<https://www.originfertilisers.co.uk/>

*E-mail:*

[safety@originukoperations.co.uk](mailto:safety@originukoperations.co.uk)

*Revision:*

24/10/2024

*SDS Version:*

1.0

#### 1.4. Emergency telephone number

Healthcare professionals: Dial 0344 892 0111 to reach The National Poisons Information Service (NPIS) (24 hour service)

General public:

England - Dial 111 to reach NHS 111 (24 hour service)

Scotland - Dial 112 to reach NHS 24 (24 hour service)

Wales - Dial 111 or 0845 4647 to reach NHS Direct (24 hour service)

See section 4 "First aid measures".

### SECTION 2: HAZARDS IDENTIFICATION



According to REACH Regulation (EC) No 1907/2006, as retained and amended by SI 2019/758 and SI 2020/1577

Classified according to Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.

### 2.1. Classification of the substance or mixture

Eye Irrit. 2; H319, Causes serious eye irritation.

### 2.2. Label elements

*Hazard pictogram(s):*



*Signal word:*

Warning

*Hazard statement(s):*

Causes serious eye irritation. (H319)

*Precautionary statement(s):*

*General:*

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*Prevention:*

Wear eye protection/protective gloves/protective clothing. (P280)

*Response:*

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. (P305+P351+P338)

If eye irritation persists: Get medical advice/attention. (P337+P313)

*Storage:*

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*Disposal:*

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*Hazardous substances:*

None known.

*Additional labelling:*

Not applicable.

### 2.3. Other hazards

*Additional warnings:*

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

This product does not contain any substances considered to be endocrine disruptors in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2023/707.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1. Substances

Not applicable. This product is a mixture.

### 3.2. Mixtures

Product/substance	Identifiers	% w/w	Classification	Note
Ammonium nitrate	CAS No.: 6484-52-2	60-80%	Ox. Sol. 3, H272	[3]



According to REACH Regulation (EC) No 1907/2006, as retained and amended by SI 2019/758 and SI 2020/1577

	EC No.: 229-347-8 UK-REACH: Index No.:		Eye Irrit. 2, H319	
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See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

### Other information

[3] According to UK REACH, Annex XVII, the substance is subject to restrictions.

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

*General information:*

In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet.

Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

*Inhalation:*

Upon breathing difficulties or irritation of the respiratory tract: Bring the person into fresh air and stay with him/her.

*Skin contact:*

Upon irritation: rinse with water. In the event of continued irritation, seek medical assistance.

*Eye contact:*

If in eyes: Flush eyes immediately with plenty of water or isotonic water (20-30 °C) for at least 5 minutes and continue until irritation stops. Remove contact lenses. Make sure to flush under upper and lower eyelids. If irritation continues, contact a doctor. Continue flushing during transport.

*Ingestion:*

If the person is conscious, rinse the mouth with water and stay with the person. Never give the person anything to drink. In case of malaise, seek medical advice immediately and bring the safety data sheet or label from the product. Do not induce vomiting, unless recommended by the doctor. Have the person lean forward with head down to avoid inhalation of or choking on vomited material.



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*Burns:*

Not applicable.

**4.2. Most important symptoms and effects, both acute and delayed**

Headache, Methaemoglobinaemia (Ammonium nitrate)

Irritation effects: This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

**4.3. Indication of any immediate medical attention and special treatment needed**

If eye irritation persists: Get medical advice/attention.

**Information to medics**

Bring this safety data sheet or the label from this product.

## SECTION 5: FIREFIGHTING MEASURES

**5.1. Extinguishing media**

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, powder, water mist.

Unsuitable extinguishing media: Waterjets should not be used, since they can spread the fire.

**5.2. Special hazards arising from the substance or mixture**

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.

If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:

Halogenated compounds

Sulphur oxides

Nitrogen oxides (NO<sub>x</sub>)

Carbon oxides (CO / CO<sub>2</sub>)

Some metal oxides

Ammonia (NH<sub>3</sub>)

**5.3. Advice for firefighters**

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact The National Poisons Information Service (dial 111, 24 h service) in order to obtain further advice.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

**6.1. Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation, especially in confined areas.

Contaminated areas may be slippery.

**6.2. Environmental precautions**

Avoid discharge to lakes, streams, sewers, etc. In the event of leakage to the surroundings, contact local environmental authorities.

**6.3. Methods and material for containment and cleaning up**

Limit spillage, sweep up and shovel into appropriate containers for disposal. Store in suitable, closed containers for disposal.



According to REACH Regulation (EC) No 1907/2006, as retained and amended by SI 2019/758 and SI 2020/1577

Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

#### 6.4. Reference to other sections

See section 13 "Disposal considerations" on handling of waste.

See section 8 "Exposure controls/personal protection" for protective measures.

## SECTION 7: HANDLING AND STORAGE

### 7.1. Precautions for safe handling

Smoking, drinking and consumption of food is not allowed in the work area.

See section 8 "Exposure controls/personal protection" for information on personal protection.

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

Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

*Recommended storage material:*

Keep only in original packaging.

*Storage conditions:*

Dry, cool and well ventilated

*Incompatible materials:*

Strong oxidizing agents

Strong acids

Combustible materials

### 7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

Calcium carbonate

Long term exposure limit (8 hours) (mg/m<sup>3</sup>): 10(inhalable)/4(respirable)

The Control of Substances Hazardous to Health Regulations 2002. SI 2002/2677 The Stationery Office 2002.

EH40/2005 Workplace exposure limits (Fourth Edition 2020).

### DNEL

Ammonium nitrate

Duration:	Route of exposure:	DNEL:
Long term – Systemic effects - General population	Dermal	2.56 mg/kg bw/day
Long term – Systemic effects - Workers	Dermal	5.12 mg/kg bw/day
Long term – Systemic effects - General population	Inhalation	8.9 mg/m <sup>3</sup>
Long term – Systemic effects - Workers	Inhalation	36 mg/m <sup>3</sup>
Long term – Systemic effects - General population	Oral	2.56 mg/kg



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		bw/day
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Calcium carbonate

Duration:	Route of exposure:	DNEL:
Long term – Local effects - General population	Inhalation	1.06 mg/m <sup>3</sup>
Long term – Local effects - Workers	Inhalation	6.36 mg/m <sup>3</sup>
Long term – Systemic effects - General population	Oral	6.1 mg/kg bw/day
Short term – Systemic effects - General population	Oral	6.1 mg/kg bw/day

## PNEC

Ammonium nitrate

Route of exposure:	Duration of Exposure:	PNEC:
Sewage treatment plant		18 mg/L

Calcium carbonate

Route of exposure:	Duration of Exposure:	PNEC:
Sewage treatment plant		100 mg/L

## 8.2. Exposure controls

Compliance with the given occupational exposure limits values should be controlled on a regular basis.

*General recommendations:*

Smoking, drinking and consumption of food is not allowed in the work area.

*Exposure scenarios:*

There are no exposure scenarios implemented for this product.

*Exposure limits:*

Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.

*Appropriate technical measures:*

Apply standard precautions during use of the product. Avoid inhalation of gas or dust. Airborne gas and dust concentrations must be kept at a minimum and below current limit values (see above). Installation of a local exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure emergency eyewash and showers are clearly marked.

*Hygiene measures:*

In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Pay special attention to hands, forearms and face.

*Measures to avoid environmental exposure:*

Excessive exposure of ammonium nitrate can lead to an over-fertilization of soil and

waters, therefore careful handling of the product is mandatory.

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


*Generally:*

Use only UKCA marked protective equipment.

*Respiratory Equipment:*

Type	Class	Colour	Standards	
Respiratory protection is not needed in the event of adequate ventilation.				


*Skin protection:*

Recommended	Type/Category	Standards	
Dedicated work clothing should be worn.	-	-	

*Hand protection:*

Material	Glove thickness (mm)	Breakthrough time (min.)	Standards	

*Eye protection:*

Type	Standards	
Safety glasses with side shields.	EN166	

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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

*Physical state:*

Granulate

*Colour:*

Various colours

*Odour / Odour threshold:*

No relevant or available data due to the nature of the product.

*pH:*

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*pH in solution:*

5-7 (5%)

*Density (g/cm<sup>3</sup>):*

0.7-1.0

*Kinematic viscosity:*

Does not apply to solids.

*Particle characteristics:*

No relevant or available data due to the nature of the product.

### Phase changes



According to REACH Regulation (EC) No 1907/2006, as retained and amended by SI 2019/758 and SI 2020/1577

<i>Melting point/Freezing point (°C):</i>	No relevant or available data due to the nature of the product.
<i>Softening point/range (°C):</i>	Does not apply to solids.
<i>Boiling point (°C):</i>	Does not apply to solids.
<i>Vapour pressure:</i>	No relevant or available data due to the nature of the product.
<i>Relative vapour density:</i>	Does not apply to solids.
<i>Decomposition temperature (°C):</i>	No relevant or available data due to the nature of the product.

#### **Data on fire and explosion hazards**

<i>Flash point (°C):</i>	Does not apply to solids.
<i>Flammability (°C):</i>	No relevant or available data due to the nature of the product.
<i>Auto-ignition temperature (°C):</i>	No relevant or available data due to the nature of the product.
<i>Lower and upper explosion limit (% v/v):</i>	Does not apply to solids.

#### **Solubility**

<i>Solubility in water:</i>	No relevant or available data due to the nature of the product.
<i>n-octanol/water coefficient (LogKow):</i>	No relevant or available data due to the nature of the product.
<i>Solubility in fat (g/L):</i>	No relevant or available data due to the nature of the product.

#### **9.2. Other information**

<i>Sensitivity to shock:</i>	Yes
<i>Oxidizing properties:</i>	No relevant or available data due to the nature of the product.
<i>Other physical and chemical parameters:</i>	No data available.

### **SECTION 10: STABILITY AND REACTIVITY**

#### **10.1. Reactivity**

No data available.

#### **10.2. Chemical stability**

The product is stable under the conditions, noted in section 7 "Handling and storage".

#### **10.3. Possibility of hazardous reactions**

None known.

#### **10.4. Conditions to avoid**

Accumulation of dust  
Extremes of temperature





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#### **10.5. Incompatible materials**

Strong oxidizing agents  
Strong acids  
Combustible materials

#### **10.6. Hazardous decomposition products**

Under normal conditions of storage and use, hazardous decomposition products should not be produced

### **SECTION 11: TOXICOLOGICAL INFORMATION**

#### **11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008 as retained and amended in UK law**

##### **Acute toxicity**

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

##### **Skin corrosion/irritation**

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

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

Causes serious eye irritation.

##### **Respiratory sensitisation**

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

##### **Skin sensitisation**

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

##### **Germ cell mutagenicity**

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

##### **Carcinogenicity**

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

##### **Reproductive toxicity**

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

##### **STOT-single exposure**

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

##### **STOT-repeated exposure**

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

##### **Aspiration hazard**

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

#### **11.2. Information on other hazards**

##### **Long term effects**

Irritation effects: This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

##### **Endocrine disrupting properties**

This mixture/product does not contain any substances known to have hormone-disrupting



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properties in relation to health.

**Other information**

None known.

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**SECTION 12: ECOLOGICAL INFORMATION**

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**12.1. Toxicity**

No data available.

**12.2. Persistence and degradability**

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

**12.3. Bioaccumulative potential**

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

**12.4. Mobility in soil**

No data available.

**12.5. Results of PBT and vPvB assessment**

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

**12.6. Endocrine disrupting properties**

This mixture/product does not contain any substances considered to have endocrine-disrupting properties in relation to the environment.

**12.7. Other adverse effects**

None known.

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**SECTION 13: DISPOSAL CONSIDERATIONS**

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**Waste treatment methods**

Product is covered by the regulations on hazardous waste.

HP 4 - Irritant (skin irritation and eye damage)

Dispose of contents/container to an approved waste disposal plant.

Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.

**EWC code**

Not applicable.

**Specific labelling**

**Contaminated packing**

Packaging containing residues of the product must be disposed of similarly to the product.

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**SECTION 14: TRANSPORT INFORMATION**

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According to REACH Regulation (EC) No 1907/2006, as retained and amended by SI 2019/758 and SI 2020/1577

	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other informat ion:
ADR	-	-	-	-	-	-
IMDG	-	-	-	-	-	-
IATA	-	-	-	-	-	-

\* Packing group

\*\* Environmental hazards

#### Additional information

Not dangerous goods according to ADR, IATA and IMDG.

#### 14.6. Special precautions for user

Not applicable.

#### 14.7. Maritime transport in bulk according to IMO instruments

No data available.

## SECTION 15: REGULATORY INFORMATION

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

*Restrictions for application:*

Restricted to professional users.

*Demands for specific education:*

No specific requirements.

*Control of Major Accident Hazards (COMAH) - Categories / dangerous substances:*

Ammonium nitrate

*Regulation on explosives precursors:*

Ammonium nitrate (Annex I)

*UK-REACH, Annex XVII:*

Ammonium nitrate is subject to restrictions, UK-REACH annex XVII (entry 58).

*Additional information:*

Not applicable.

*Sources:*

Control of Major Accident Hazards (COMAH) Regulations 2015.  
Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.  
Council Regulation (EC) No 2019/1148 on explosives precursors as retained and amended in UK law.  
Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP) as retained and amended in UK law.  
Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and



According to REACH Regulation (EC) No 1907/2006, as retained and amended by SI 2019/758 and SI 2020/1577

Restriction of Chemicals (REACH) as retained and amended in UK law.

## 15.2. Chemical safety assessment

No

## SECTION 16: OTHER INFORMATION

### Full text of H-phrases as mentioned in section 3

H272, May intensify fire; oxidiser.

H319, Causes serious eye irritation.

### Abbreviations and acronyms

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway

ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road

ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

CAS = Chemical Abstracts Service

CE = Conformité Européenne (European conformity)

CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]

CSA = Chemical Safety Assessment

CSR = Chemical Safety Report

DMEL = Derived Minimal Effect Level

DNEL = Derived No Effect Level

EINECS = European Inventory of Existing Commercial chemical Substances

ES = Exposure Scenario

EUH statement = CLP-specific Hazard statement

EuPCS = European Product Categorisation System

EWC = European Waste Catalogue

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

GWP = Global warming potential

IARC = International Agency for Research on Cancer (IARC)

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

OECD = Organisation for Economic Co-operation and Development

PBT = Persistent, Bioaccumulative and Toxic

PNEC = Predicted No Effect Concentration

RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail

RRN = REACH Registration Number

SCL = A specific concentration limit

SVHC = Substances of Very High Concern

STOT-RE = Specific Target Organ Toxicity - Repeated Exposure

STOT-SE = Specific Target Organ Toxicity - Single Exposure



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TWA = Time weighted average

UN = United Nations

UVBC = Unknown or variable composition, complex reaction products or of biological materials

VOC = Volatile Organic Compound

vPvB = Very Persistent and Very Bioaccumulative

### **Additional information**

The classification of the substance/mixture in regard of health hazards are in accordance with the calculation methods given by Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.

### **The safety data sheet is validated by**

Carl Fuller

### **Other**

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a triangle.

The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.

It is recommended to hand over this safety data sheet to the actual user of the product.

Information in this safety data sheet cannot be used as a product specification.

Country-language: GB-en